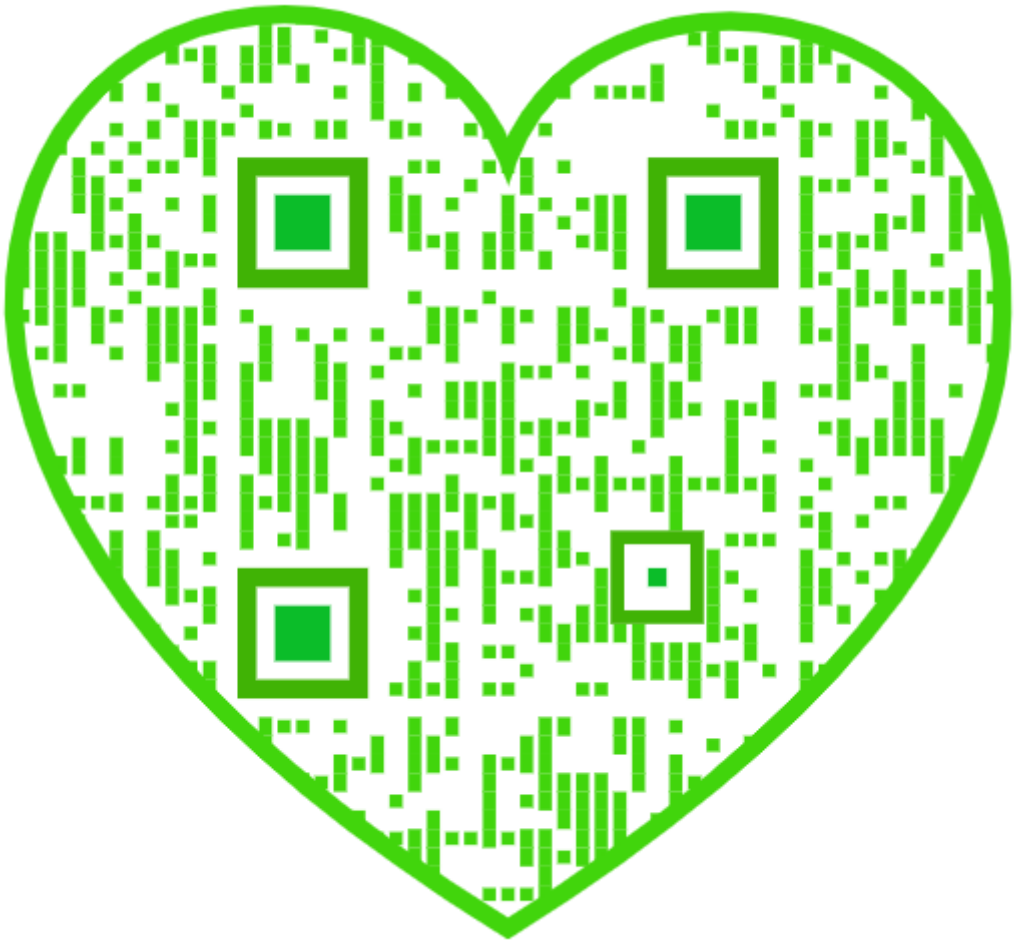
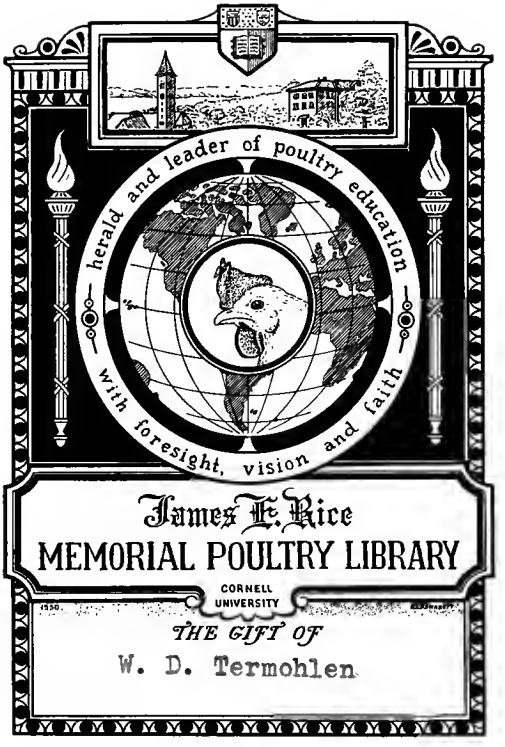
THE BRAHMA FOWL.

Lewis Wright.





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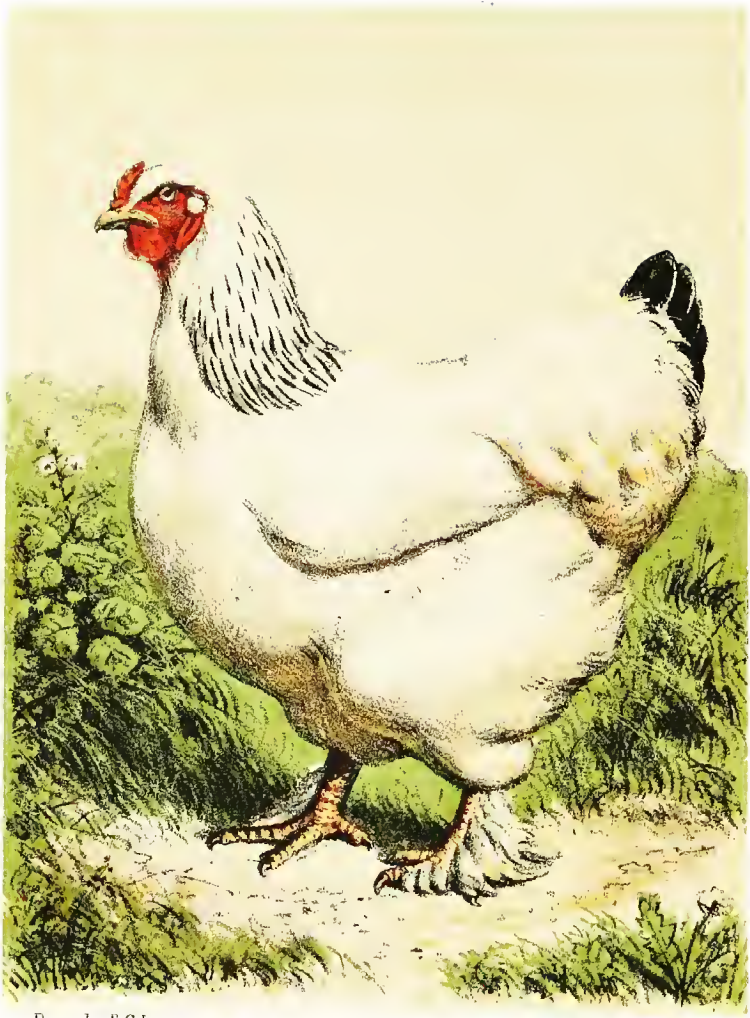

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LIGHT BRAHMA HEN,

BRED & EXHIBITED BY MR F. CROOK.

THE

BRAHMA FOWL:

A MONOGRAPH.

BY

LEWIS WRIGHT,

AUTHOR OF "THE PRACTICAL POULTRY-KEEPER."

LONDON:
"JOURNAL OF HORTICULTURE AND COTTAGE GARDENER"
OFFICE, 171, FLEET STREET;
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PREFACE.

THIS little work, whatever its merits or defects, was not written from a poultry-fancier's mere unconsidered enthusiasm for his favorite fowl. After much study of many breeds, and considerable experience in many ways, we had come to the conclusion that the Brahma—though not perfect, or even suitable for every purpose—is upon the whole best adapted to the English climate, and occupies a position among poultry similar to that of the Shorthorn among other races of cattle. It will thrive and pay where no other can be kept in health; and as a purveyor—not of the *very* choicest—but of choice, honest, solid food, it is what Miss Watts has said, "about the best fowl we have ever had."

We have however found that the breed has been often misunderstood, both as to its qualities and management, so that even its merits have been converted into defects. We have found also, that no fowl is more difficult to breed to an exhibition standard; and we still have dozens of complaints from purchasers who have procured the very best birds quite

regardless of expense, and have only succeeded in breeding "trash," for want of knowledge how to mate them. And these two branches of the subject are intimately connected. We have long been fully persuaded that the knowledge, enthusiasm, and patient perseverance of the *fancier* are highly necessary to improve and maintain any breed in perfection for even the utilitarian. This fact is often forgotten, and the statement of it may be met with ridicule now. But we do assert that even the poultry-fancy may be carried on in the reverent spirit of earnest *work*, and that we know some who are really seeking in this way, not alone to amuse their leisure, but in the fear of God to benefit the community of which they form a part.

And therefore we have thought it worth while to give time, and thought, and labor, even to a book about "nothing but Brahmas." We hope to help the mere fancier. But we hope also, indirectly to increase the resources of the farmer: we hope to add to the luxuries of the breakfast-table: we hope—far, far more—to cheapen, if it may be, wholesome food, for some striving middle-class families.

Whether any personal apology be needful for attempting such a task, we do not know. Cut off hitherto by the disadvantages of a very small town yard from most of the honors of exhibition, we can only say that we have studied the fowl

quietly and lovingly at very close quarters, often stroking down a favorite pullet as we would a cat. We have found there was much to learn about them—much character in them. By degrees our opinion has come to be valued and sought: we have had opportunities of study and comparison in many other yards: and many a cup has been ascribed—in terms much beyond our real desert—to the slight services we have been enabled at different times to render. The personal solicitations of friends thus acquired, are partly answerable for the publication of this book.

We have, however, to acknowledge assistance from many, especially those whose names appear in different places; and to Mr. Teebay in particular our obligations are much greater than can be here expressed. Much of our own earliest and soundest knowledge of the fowl has been derived from him; and he has taken an interest in this attempt at an exposition of his old and favorite breed, which could have been less expected of a fancier than of a personal friend. This might indeed be said of almost all, and has cheered us on in an undertaking, which has greatly exceeded in extent either our intentions or expectations when we began.

Some one once wrote a good essay "Concerning things which cannot go on," including his own composition amongst the number; and so, very possibly, our readers may think

that our long preface had better stop. We will only add that this work has been written in intervals snatched from other more important literary labors, and often interrupted by ill-health; and that from these causes combined, nearly *two years* have elapsed between the printing of the first pages and the last. The delay has enabled us to add an important appendix: we trust in some degree it will account for the somewhat fragmentary character, and other faults of the book as a literary production.

Here we are, then, at the end of our labor. We can truly say it has been a labor of love, undertaken as it was without the slightest prospect of pecuniary reward; and it has yielded to ourselves, in the midst of some "weariness of the flesh," both pleasure and benefit in many, many ways. If the result shall yield to the reader any fair proportion of either, we shall have no reason to regret having attempted this treatise on "The Brahma Fowl."

Kingsdown, Bristol,

February 1*st*, 1870.

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THE BRAHMA FOWL.

CHAPTER I.

The Origin of Brahmas.

NO subject has caused so much, so long, and such angry discussion in the poultry world as the origin of the Brahma fowl, though the variety was unquestionably first introduced into England as late as the year 1852, when two pens were shown at Birmingham by Mrs. Hosier Williams and Dr. Gwynne. On the one hand it was said that the fowl was a new breed, or at least a new sub-variety with distinct characteristics, originally imported from India; whilst on the other side it was contended that the birds were either a cross between the Cochin and Malay, or at best, if a pure race at all, with nothing but color to distinguish them from Cochins. For several years the controversy was carried on with great ability on both sides, until at length the public grew weary of the subject; and though each party claimed the victory, the matter has never been really settled yet!

After so long an interval, it may appear presumptuous to reopen the question; and were it merely one of interest to the Brahma fancier, we certainly should not have done so. But such is by no means the case. The correct decision of this

matter has an important bearing upon the question of the formation of new varieties and the origin of species, and is so quoted by Mr. Darwin, who in his last work *—a work we know not whether to regard as most remarkable for the extraordinary amount of gratuitous assumption with which it abounds, or the number and great value of the facts which it contains—cites this very breed as part of the argument in favour of his well-known theory, stating (vol. ii. p. 96.) on the authority of Mr. Tegetmeier, that "Dark Brahmas, which are believed by some fanciers to constitute a distinct breed, were undoubtedly formed in the United States within a recent period by a cross between Chittagongs and Cochins." Hence the solution of the question becomes of some interest to the naturalist, and even to the theologian. And having entered upon an investigation of the matter some time since from simple interest in the breed, it appeared to us possible even yet to throw some additional light upon the subject, and with the valuable aid which, as will be presently seen, Mr. Darwin's own recent researches afford to the inquiry, to point with almost certainty to a scientific and rational conclusion.

It will first of all be necessary to examine the personal testimony which bears upon the subject, and which we think has never hitherto been properly investigated.

And first, to quote by far the most able exponent of the Cochin theory, Mr. Tegetmeier says,† "There is not a particle

* The Variation of Animals and Plants under Domestication : by Charles Darwin, M.A., F.R.S. London ; 1868.

† The Poultry Book, p. 55.

of evidence to show that they came from India. The banks of the Brahma-Pootra have long been in the possession of the British, and no such fowls were ever seen in the locality. In fact, Brahmas originated, not in India, but in America; and the two varieties of the breed now known as Dark and Light had unquestionably *very distinct origins*."* He then goes on to say that the Light Birds "undoubtedly originated in, or were identical with, those grey fowls that from the very first came over from Shanghæ with the buff and partridge birds now universally known as Cochins," and, as undoubted evidence of this, quotes Mr. Burnham's "amusing and unscrupulous work," entitled *A History of the Hen Fever*, published at Boston in 1855. In this work Mr. Burnham, who, it will be remembered, sent over some of the earliest so-called Brahmas as a present to Her Majesty, which arrived in January, 1853, affirms in effect that *he originated them*, relating how, out of a hundred Cochin fowls "of all colours, grades, and proportions," brought over by an enterprising captain, he selected "a few grey birds, that were very large and consequently very fine." These he bred with other grey stock he had, and "soon had a fine lot of birds."† We have thus two very definite statements

* These Italics are our own, the statement being of some importance.

† Grey Shanghæs were frequently met with, in America as well as England, both before and after Brahmas were introduced. Mr. White, of East Randolph, Mass., is considered by United States fanciers to have been the first who imported this variety, and he never pretended for a moment that they were identical with the Brahmas. Their color is more what is called in America "Dominique," or resembling the "Dominique" fowl: and is not what we call pencilling, but almost exactly the color and marking of the Cuckoo Dorking or Scotch Grey. In fact they are often still shown as *Cuckoo* Cochins.

by Mr. Burnham: first, that *he was the founder* or original breeder of Brahmas; and secondly, that the Light variety were pure, uncrossed *grey Cochins.*

On the other hand, of the Dark breed, which Mr. Tegetmeier has already affirmed to be of "very distinct origin" from the Light, he writes simply, "Mr. Burnham states that they were *grey Chittagongs crossed* with Cochins. 'Of this,' he says, 'no one now entertains a doubt.'" As this single line, however, by no means does justice to the illustrious authority quoted as decisive, we transcribe from *The Hen Fever* the entire passage. It will at all events amuse the reader, and is also useful as showing how far Burnham's description agrees with or differs from that of a genuine or real Brahma.

"When, in 1850 and '51, the '*Bother'ems*' began to be brought into notice, I saw at once that, although this was bubble number two, it ought to have been number *one* decidedly.

"Never was a grosser hum perpetrated than this was, from beginning to end, even in the notorious hum of the hen-trade. There was absolutely nothing whatever in it, about it, or connected with it, that possessed the first shade of substance to recommend it, saving its *name.* And even this could not have saved it, but from the fact that nobody (not even the originator of the unpronounceable cognomen himself) was ever able to write or spell it twice in the same manner.

"The variety of fowl itself was the *Grey Chittagong*, to which allusion has already been made, and the *first* samples

of which I obtained from 'Asa Rugg,' (Dr. Kerr) of Philadelphia in 1850. Of this no one now entertains a doubt. They were the identical fowl all over—size, plumage, and characteristics.*

"But my friend the Doctor wanted to put forth something that would take better than his 'Plymouth Rocks;' and so he consulted me as to a name for a brace of *grey* fowls I saw in his yard. I always objected to the multiplying of titles; but he insisted, and finally entered them at our Fitchburg Depôt Show as '*Burrampooters*,' all the way from India.

"These three fowls were bred from Asa Rugg's Grey Chittagong cock, with a yellow Shanghae hen, in Plymouth, Mass. They were an evident cross, all three of them having *a top knot!* But, *n'importe.* They were then 'Burrampooters.'

* As the Chittagong has been affirmed by others besides Burnham to be identical with the Brahma, it may be as well to state, what is not perhaps generally known, that Dr. Bennett was a great admirer and breeder of this fowl before he obtained his Brahma stock, and could not have failed to detect any similarity. In the American Poultry Book of 1850, he gives a detailed description of it, stating the cock to be of a *grey* color in the body, and the legs usually quite clear, but occasionally feathered, with very frequently *nine or ten toes* between them, and the comb *large and single.* No evidence could be plainer of a Dorking cross; and accordingly Dr. Kerr, another well-known breeder of the variety, who is alluded to by Burnham in this very paragraph, describes it as "a mongrel, and like all mongrels, of little real value." Both he and Geo. Smith, Esq., of Philadelphia, unite in describing the birds as "poor layers and bad sitters," very lazy, and subject to gout in the feet. These testimonies from the two gentlemen who have bred the Chittagong most extensively in America, must be of far more weight than the opinion of any in England who have *never seen the bird*; and the assertion that a fowl possessing the qualities described, by a lucky cross originated the Brahma, makes larger demands on our credulity than almost any other theory which could be advanced.

"Subsequently these fowls came to be called 'Burampootras,' 'Barram Putras,' 'Bramapooters,' 'Brahmas,' 'Brama Puters,' 'Brama Poutras,' and at last 'Brahma Pootras.' In the meantime, they were advertized to be exhibited at various fairs in different parts of the country under the above changes of title, varied in certain instances as follows: 'Burma Porters,' 'Bahama Paduas,' 'Bohemian Pudras,' 'Bahama Pudras;' and for these three *last* named, prizes were actually offered at a Maryland fair in 1851!

"Peter Snooks, Esq. it appears had the honour to be the fortunate possessor of this invaluable variety of fancy poultry in its unadulterated purity of blood. He furnished from his own yard samples of this rare and desirable stock for His Royal Highness Prince Albert, and also sent samples to several other noted potentates, whose taste was acknowledged to be unquestionable, including the King of Roratonga, the Rajah of Gabblesquash, His Majesty of the Cannibal Islands, and the Mosquito King. Peter supplies the annexed description of the superior properties of this variety of fowls:—

"'The '*Bother'em Pootrums*' are generally hatched from eggs. The original pair were not! *they* were sent from India, by way of Nantucket, in a whale ship.

"'They are a singularly *picture-squee* fowl from the very shell. Imagine a crate-full of lean, plucked chickens, taking leg-bail for their liberty, and persevering around Faneuil Hall at the rate of five miles an hour, and you have an idea of their extremely ornamental appearance.

"'They are remarkable for producing bone, and as re-

markable for producing offal. I have had one analysed lately by a celebrated chemist with the following result—

Feathers and Offal	39·00
Bony Substances	50·00
Very tough Muscle and Sinew	9·00
Miscellaneous Residuum	2·00
	100·00'

"A peculiarly well-developed faculty in this extraordinarily fine breed of domestic fowl is that of *eating*. 'A tolerably well-fed Bother'em will dispose of as much corn as a common horse,' insists Mr. S——. This goes beyond *me;* for I have found that they could be kept on the allowance, ordinarily, that I appropriated daily to the same number of good sized store hogs. As to affording them *all* they would eat, I never did that. Oh no! I am pretty well off, pecuniarily; but not rich enough to attempt any such foolhardy experiment as that!

"But Snooks is correct about one thing. 'They are not fastidious or particular about *what* they eat.' Whatever is portable to them is adapted to their taste for devouring. Old hats, India-rubber, boots and shoes, or stray socks are not out-of-the-way fare with them. They are amazingly fond of corn, especially *a good deal of it.* They *will* eat wheaten bread rather than want."

This matchless effusion was at the time considered by many to settle the question as to the origin of Brahmas! By some it may be thought to do so still: others will wonder whether any one would like to hang a house-cat upon such evidence:

for ourselves, we shall simply bring Mr. Burnham's statements, as we would any other, to the test of facts.

And first it may be well to quote the account of the matter given in *The Poultry Yard*, being a quotation from a letter written by Mr. V. Cornish, of Connecticut, U. S. Mr. Cornish says:

"In regard to the history of these fowls very little is known. A mechanic, by the name of Chamberlain, in this city, first brought them here. Mr. Chamberlain was acquainted with a sailor, who informed him that there were three pairs of large imported fowls in New York; and he dwelt so much upon the enormous size of these fowls, that Mr. Chamberlain furnished him with money, and directed him to go to New York and purchase a pair of them for him; which he did at a great expense. The sailor reported that he found one pair of light gray ones, which he purchased; the second pair was dark-coloured; and the third pair was red. The man in New York, whose name I have not got, gave no account of their origin, except that they had been brought there by some sailors in the India ships. The parties through whose hands the fowls came, as far back as I have been able to trace them, are all obscure men. I obtained my stock from the original pair brought here by Mr. Chamberlain, and have never crossed them in the least. These fowls were named Chittagong by Mr. Chamberlain, on account of their resemblance, *in some degree*, to the fowls then in the country called by that name; but it is certain they never bred until they reached this town."

It should be remembered that this was the *first* published history of the matter; but by advocates of the Cochin theory it was supposed to be disproved by that of Mr. Burnham, and no inquiry seems to have been made by either party as to how far either account was corroborated or confuted by other testimony; though it will at once be seen that this is the question upon which almost everything depends. Here, therefore, we commenced our investigation; and must in justice acknowledge our great obligations to Mr. F. Crook, who has aided us by making special inquiries in America on our behalf regarding circumstances and facts now nearly forgotten, and by information obtained in reply from various correspondents afforded us assistance, the value of which, in a question of this kind, it is very difficult to estimate.

It appears then, both from the statements of private correspondents and from various papers of the period, that the first *public* exhibition of Light Brahmas took place at the Fitzburg Poultry Show, on October 2nd, 3rd, and 4th, 1850. They were chickens, and were the property of Dr. J. C. Bennett, of Great Falls. This pen was considered magnificent in every way, and was the principal attraction of the show. The obvious question at once occurs, from whom did Dr. Bennett procure these birds? and it is impossible to doubt his own statement, made in answer to every enquiry, that he had "purchased them, at a very high figure, from *Mr. Cornish, of Connecticut.*" A portion of Mr. Cornish's letter, not quoted in *The Poultry Yard*, states that Chamberlain brought his fowls into the State in the early part of 1849: and it will be seen that these facts and dates, though entirely independent,

corroborate Mr. Cornish's account in every particular, and Mr. Burnham's general claim to have been the *first* breeder of Brahmas at once falls to the ground.

Dr. Bennett bred from this pair of chickens shown at Fitzburg, and the produce were of the first order; for in November, 1851, he again exhibited chickens of this breed, as did also Mr. Parkinson and Mr. S. O. Hatch, *all of Connecticut*. Again these Brahmas were the centre of attraction; but on this occasion Mr. Hatch beat the Doctor, who straightway purchased all of Mr. H.'s birds at the show. These facts also strongly, though indirectly, corroborate Mr. Cornish's account, proving on the one hand that, for at least two seasons, *Connecticut* was the head quarters of the breed, and on the other, that from the very first it bred with extreme purity as regards all the characteristics.

We also find distinct evidence as to Mr. Burnham, who, it appears, was a large professed dealer in and breeder of poultry as a matter of business. He visited the New England Society's Show in 1850, and endeavoured to purchase some of the Brahma stock there exhibited, but failed. On this occasion he *admitted*, both to Mr. Cornish, who was also there, and to Mr. Morse, the Secretary, that he had *never seen anything like them before*, and again that he "had never seen the pure Brahma-Pootras before," although he had (as we also find) been selling birds he *called* Brahmas before this, and at high prices. Amongst other testimony to the latter fact, and also to the essential difference at this date between Burnham's sham Brahmas and Dr. Bennett's genuine ones, at the same Society's (New England) Show in 1852, Dr. De Gruy stated

that he had previously bought some of Mr. Burnham's so-called Light Brahmas, and they were "no more like the true Brahmas than an owl is like a hawk!" and that having just afterwards purchased a pair of Dr. Bennett's strain, for which he gave fifty dollars, "he was actually offered 150 dollars for them, which he refused!"

It appears, therefore, indisputable, that up to 1852 Mr. Burnham had no real Brahmas in his possession; but having a large number of Cochins, of all colours, that he endeavoured to *imitate* for business purposes a fowl he found so popular and valuable, at the same time being perfectly aware of the great difference between the real strain and his own. What he may have done after that date is uncertain: it is believed that at the Boston Show in 1852 some of the real Brahmas were purchased for him, though not in his name; and in singular contrast to the amusing passage above quoted, we accordingly find him writing concerning *these* birds: "the specimens exhibited at the late fair in Boston, 1852, were extraordinary specimens, both old and young—they are really an *extraordinary race*, and cannot fail to become popular."

Regarding the question of personal testimony, therefore, as between Mr. Cornish or Dr. Bennett on the one hand, and Mr. Burnham on the other, there cannot now be two opinions. That Burnham bred many tolerable *imitations* before he got possession of real Brahmas, is likely enough, and the distribution of these birds has done more to complicate the whole question than anything else; as they have been not only bred *inter se*, but crossed in all good faith with the genuine race, so giving rise to strains of all degrees of purity and shades of

character. Thus, the difference in shape of the Light birds sent by him to the Queen in 1852, and the Darks sent by him after, as shown in the cuts of *The Illustrated London News*, is most apparent. Mr. Tegetmeier hence argues that Dark and Light had "very distinct origins;" but it is apparent to every breeder of the fowl that the one variety figured (the Dark) *is a Brahma*, while the other is not; and the inference is, that previously to the last consignment Burnham had got hold of the genuine strain, again exactly corroborating the testimony above. But there is other evidence of the same fact. Thus, in the *Cottage Gardener* of 1853, Mr. P. Jones states the fact of a pair of grey chickens he bought breeding "*silver cinnamon*" offspring; whilst the pure unmixed stock of Dr. Gwynne (who had his direct from Dr. Bennett), Mr. Sheehan, and others, "invariably bred pure grey." Again, in December of the same year, the Editor of the same journal states, that "while what have been considered as the purest strain of the Brahma-Pootras *have thrown pure chickens only*, we know on good authority that the produce of *imported birds of equally high pretensions* have produced buff chickens with black hackles." Nothing can be clearer, than that from the first date of their being known in England, Dr. Bennett's strain of Brahmas *bred true*, whilst there were other birds, also imported, and "of equally high pretensions," which did not.

So far then as positive evidence is concerned, when correlated with well ascertained circumstances, it must be considered decisively to establish the fact that Burnham's account was a deception, (except so far as it may describe the origin of his

sham birds), while Mr. Cornish was correct; and that all the genuine Brahmas were bred from the original pair brought into Connecticut by Mr. Chamberlain. But it still remains to determine *what* these fowls were. *They* might as possibly have been Grey Shanghæs as those Burnham says he bought of his "enterprising captain;" and we have now therefore to examine the fowl itself, to see if any light can be thrown upon what after all is the most important question.

And first of all, we find neither testimony nor facts to corroborate the opinion that there were two races of "very distinct origin," whilst many facts prove there was but one. We have made many enquiries relative to this matter, and all with the same result. Miss Watts, whose strain is probably the only one now existing which has not been crossed, has assured us in the most distinct manner that she had but *one stock*, from which by selection she has bred both Dark and Light. To put the matter more definitely still, Mr. Joseph Hinton—also one of our oldest breeders—states that his birds were originally Light, from Mr. Garbanati, Dr. Gwynne, and Mr. Davies of Hounslow. He afterwards received a medium coloured or rather dark cock from Mr. J. K. Fowler, from which bird and the darker of his Light hens, he bred a most beautiful Dark cock (second at the Crystal Palace Show) and several hens so heavily and intensely marked as to be almost black. From these birds were bred his well-known cock *Champion*, and hens as we see them now. Thus, by the third year, and solely by the established rules of breeding, he had *transformed his strain* from Light to Dark, obtaining also in transit several laced birds of great beauty, which it is a pity

were not perpetuated. In our own yard, we have found that black Brahmas could be easily bred if necessary, or on the other hand, that they could be brought back again to Light. Now it is incontestable that the first Brahmas were neither so dark nor so light as now. They were always called *grey*, a term which would not describe either variety now shown. Since, then, undoubted Light strains can produce Dark, and Dark have a constant tendency, if bred carelessly, to produce Light, it is obvious that the original intermediate strain would breed either with much greater facility, and may well be the parent stock of both.*

In the absence, therefore, of any evidence whatever of the sudden appearance of a second variety (for Mr. Burnham's

* It is right to state that Mr. Teebay strongly dissents from our view, and believes that there must have been another original strain to produce the Dark variety; though he holds as strongly as we do that the breed was pure. The grounds of his opinion are, that he found it impossible after several years of care in breeding, to get hens with the solid dark pencilling now shown; while he imported from America at a *very early* period birds as dark as any ever seen. There is great weight in this objection, and we can only say, that having spent more time in the investigation of the matter than we believe any one else has done, the ascertainable *facts* led us to the conclusion above stated. It is however possible enough that the whole "three pairs" of fowls mentioned, as seen by Chamberlain in New York, may have been Brahmas. As elsewhere stated, we think little of the "color" test, and should never think of doubting the fact, were there any evidence of it, simply because one pair was red, but should seek for proofs in other points which truly characterize the fowl. Were such really the case, we have often thought that the third or "very dark" pair may have got into some other hands and produced the Dark strain so much admired. This is fair hypothesis, but there is no evidence either way. We have seen that the Dark Brahma *can* be bred from the Light, or rather the Grey; and on this and other evidence contend simply that the fowl is of *one race;* were the case as supposed it would remove Mr. Teebay's difficulty, but would not affect our argument more than the different importations of Partridge and Buff Shanghæs.

account, with the light now thrown upon it, must be counted as zero) it seems probable that there was but one *genuine* original strain. This by no means implies that it did not breed true to colour, for every other variety is capable of being modified in a similar way, and care and judgment are needed incessantly to keep the plumage to a definite standard, as every fancier knows. It will moreover have been noticed that all the variation for several years was confined to degrees of black or grey, although of late, in the purest dark strains, a trace of reddish brown is very often visible in both sexes. This last is sufficiently accounted for by the constant tendency of all dark fowls to "throw back" to the black-red plumage of the original type; still, to make purity of color the proof of Brahmas being a distinct race, as Miss Watts and some others have done, seems to us a mistake, and the attempt cannot be sustained. We simply assert that all the *evidence* we have, traces the fowl back to Mr. Cornish's stock; and that all the facts harmonize with the same theory; more it is neither necessary nor prudent to affirm.

Having so far cleared the ground, we may now examine the breed more in detail. And here we cannot do better than again quote Mr. Tegetmeier, who was certainly the first, if not the only one to argue the matter on a scientific basis. "It has been remarked," he says,* "that it is a fact universally recognized by comparative anatomists, that the distinguishing characters of nearly allied varieties are more strongly marked in the bones of the skull than in any other part of the body. Now the skull of the Cochin is vaulted and arched, both from

* The Poultry Book, p. 61.

before backwards and from side to side, and possesses a peculiarly marked groove, extending from before backwards on the frontal bone; and—what every anatomist will regard as a character of great value—the long axis of the aperture through which the spinal chord issues from the skull is the perpendicular one. Now in these characters the skull of the Brahma is identical; whereas in all ordinary breeds of fowl the long axis of the occipital foramen is placed transversely, the skull wants the distinguishing frontal peculiarities, and the remarkable arched or vaulted character found in both these breeds."

This argument is forcible, and strictly philosophic. In order to do full justice to it, we have had engraved the accompanying illustration, Fig. 1. representing the occipital foramen of a Cochin of the natural size, and Fig. 2. that of the *Gallus Bankiva*, or wild type of the Game Fowl; both being taken from Mr. Darwin. It will be seen that not only

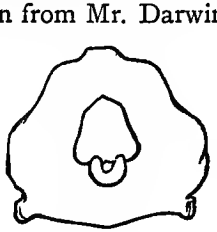


Fig. 1.

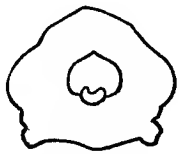


Fig. 2.

is the aperture much longer vertically, in proportion, in Fig. 1. but assumes quite a triangular form, which is entirely wanting in the foramen of the typical bird. Here then is a character which, if the example were unique, would be of unquestionably very great value. But when we come to

examine other breeds, Mr. Darwin himself (whose accuracy is unimpeachable) tells us in the course of an investigation unconnected with Brahmas altogether, that the skull of the Dorking not unfrequently exhibits the same peculiar shape of the foramen; that it occasionally occurs in some other breeds; and that in one or two varieties of Bantams the character is almost constant. On the whole therefore, while the craniological resemblance between Cochins and Brahmas must be allowed great weight, it will not do for the present to regard it as conclusive.

Similarly, the general outline, the gigantic size, the yellow legs feathered to the toes, the colour of the eggs, the period of laying (daily or nearly so) and the frequency of incubation, all are points in which there is a great resemblance between the two breeds. But here again qualification must be made. There are other breeds which lay every day; the Malay shares the resemblance in size, colour of eggs, and massive yellow shanks; and the frequency of incubation on an average is much less in the Brahma than the Cochin, though both are greater than in other breeds. With regard to the latter point, however, must be considered the hypothesis of a cross with the Malay, which might be expected to produce just such an effect on the reproductive organs; and we now begin to perceive how complicated are the conditions of the problem to be solved.

In many other points, however, the differences between Brahmas and Cochins are so marked and striking, that it is strange so acute an observer as Mr. Tegetmeier should, in common with other writers, have overlooked them. In addition

to the well-known pea-comb and the prominent breast, which seem to have been the only points hitherto remarked, we may draw attention to the length of the deaf-ears compared with the wattles; the location of the crop, which in Cochins is *above* and in Brahmas *below* the normal position; and the peculiar formation of the tail, which is more fully described and illustrated in Chapter III. The latter we regard as perhaps the strongest character of all.

Returning here for a moment to early personal testimony, we may remark that in the summer of 1852, before any Brahmas had arrived in England, Dr. Bennett wrote of them that they differed from Shanghaes as follows: "comb (*i.e.* when single) and wattles smaller, but ear-lobes much longer; shorter in leg and more compact (a most remarkable assertion when the alleged Malay cross is considered—see Mr. Crook's experience, page 29), deeper breasted and shorter quartered."

The voice is also a point of some value in a question of this kind. It is therefore important to note, that while the crow of both Cochin and Malay is hoarse and guttural, as is too well known by unlucky neighbours, that of the Brahma, when mature, is almost always long and clear. Still there are exceptions, and we have found either character hereditary; so that this feature, so far as it goes, would point to a different origin for certain strains—a conclusion singularly corroborated by the actual evidence already reviewed.

In general habits and carriage we get on rather more definite ground, the Brahma having a distinct character of its own. It is the most active of any variety except the Game; sprightly and alert in spite of its great size, it is up the first

and goes to roost the last of all our breeds. The carriage of the cock differs greatly from that of both Malay and Cochin, being bold and free, after the style of the Game fowl, and with a decisive, vigorous, *clean* step very remarkable in so large a breed. The bird is likewise of very high courage; yet is quite devoid of ferocity, and of a very tame and sociable disposition, differing greatly from both the alleged parents of his race. In both sexes there will also be observed peculiarities in the shape and carriage of the head and wings.

Still further, we will here quote Mr. F. Crook of Forest Hill, a well-known exhibitor of Light Brahmas, and an authority on all points connected with that breed. Knowing this gentleman to have paid great attention to the question we are considering, and to have made many experiments in crossing with special reference to it, we requested that he would favor us with any definite conclusions he had arrived at. Respecting pure-bred Cochins he remarks:

"A great evidence against the Shanghæ origin of Brahmas is the ground-colour of the plumage. White Cochins are white-feathered down to the skin, which latter usually appears yellow: whereas in really good Light Brahmas the fluff of the feather is grey, and so abundant that the skin is with difficulty seen—when however made visible it is not yellow, but of a pinky cast. Again, the very finest single-combed birds, with many good pea-combed ones—in fact all the first birds seen in this country, and many of the very best since, had a perceptible bar or splash of black upon the wing; and the best single-combed birds now bred in America have it still. Now this is a point which beyond controversy never occurred

in White Cochins, and is almost conclusive to one acquainted with the two breeds. Another very peculiar feature in Light Brahmas is the peculiar narrow white fringe on the feathers of the cock's tail; this is now difficult to obtain even in good strains, but in "experimental" birds is never seen at all."

The great force of these observations can only be felt by those practically acquainted with the matter. On the point of the white edge alluded to in the upper feathers of the cock's tail, we can testify from experience that though breeders have endeavoured to banish it, the tendency yet exists even in *Dark* Brahmas, still further proving that they had a common and not a "very distinct" origin from the Light. Only last season, breeding from a cock of Mr. Teebay's strain, without a vestige of white in the tail, and an *unusually* dark hen, originally a cup pullet of Mr. Boyle's, we found the point in question distinctly developed in both of the only two cockerels allowed to grow to maturity. In one the white edge was perfect, forming a fine white line entirely up each side of both feathers about $\frac{1}{16}$ in. wide; in the other the white line existed about half the length of the feathers. There were no other white marks or splashes of any kind, and the appearance would have been at once noticed by any fancier as most characteristic, though it has never previously been mentioned in connection with Brahmas.*

* Mr. Joseph Hinton draws our attention also to the color of the legs. White Cochins have a constant tendency to breed olive-colored or green legs, which is a well-known disqualification in the show pen. Now Light Brahmas when pure bred, have *never been known* to produce a green leg, very strongly corroborating the hypothesis presently advanced, that they belong to the more ancient race of the two.

Respecting a cross as the possible origin of Brahmas, Mr. Crook has transcribed from his notes the nearest results of many attempts made by him in this direction, which as they have never been published will be interesting.

"Parents, White Cochin Cock and Cuckoo Dorking hen. Produce: large framed heavy hens, of nearly white ground, color speckled and streaked with grey. The cocks fine form and shape, with speckled body on white ground. Combs single; legs of both sexes poorly feathered, and tails much too large. This produce however appeared to me likely to answer the purpose; so I mated one of the cocks again with white Dorking hens. The produce had better feathered legs, but were bad shape and nearly white, shanks mostly pink; combs single as before.

"Parents, grey Malay cock with white Cochin hens. The produce was nearer the mark in many respects than the last named, the pullets being queer shaped birds with white bodies, straight tails, and lightly pencilled hackles, head neat, but bad expression, and comb hardly visible. The cockerels had white compact bodies, lightly pencilled hackles, tail full but *drooping*,* and genuine long, flat, Malay quarters; comb coarse and warty. The best cockerel was a beautiful bird in all but what I wanted.

"Parents, Partridge Cochin cock with white Dorking hens. Produce: pullets with whitish dull grey bodies and pencilled hackles, very heavy in color. Cocks large-framed birds with fair shape, dark grey bodies and heavy hackle; single comb.

* This is to be noted, as compared with the remarkably *erect* tail of the Brahma, much more erect than that of the Cochin.

"I mated this last cockerel again with white Cochin hens. Produce: Cochin-like, bad-shaped, but finely framed heavy hens, of white ground color with the body feathers prettily laced, and hackles darkly pencilled. Cockerels fine heavy birds similar in color to the pullets, but rather lighter, with single combs.

"One of these last cockerels I mated again with buff Cochin hens. Produce; large pullets, buff and brown on the back, hackles pencilled, legs well feathered, with single combs. Cocks similar, but more brownish yellow all over, with pencilled hackles and single combs. A pen of these last were sent to a show in 1864, with the notification, 'this pen is the result of many attempts to produce a Light Brahma.' No notice was taken of them in any way.

"I should add, that seeing a remark in print which much astonished me, to the effect that any two opposite varieties of fowl with single combs would produce a true triple or pea-comb, I tried the very varieties mentioned as an instance, viz., a Cochin hen with a Spanish cock; but the result with me was a perfectly arched Spanish comb of finer quality than usual."

In fact, the mere probability against a new breed of fowls being founded, by any cross *at once* breeding true to colour and feather (to say nothing of other points) is so strong, that the theory would never have been entertained at all, were not certain instances apparently established in which such has been the case. Few as such instances are, we must therefore for the present admit there is a bare possibility that Brahmas may have formed another example of this rare

phenomenon in breeding; and proceed to consider rather more minutely the pea-comb, which, as being so peculiar, we might reasonably hope would assist us in arriving at the truth, and bringing our investigation of this curious subject to a close.

This comb is unique, differing both from the single, the rose, the cup, and Malay comb; and while it is unquestionable that many of the early pure Brahmas had single combs, it is still more incontestable that the great majority had from the first this peculiar pea-comb, which had such a superior *vitality* or relationship to the breed, as to remain a predominant feature in the fowl. Now it will have been noticed, that not only did Mr. Crook's experiment of crossing Spanish with Cochins fail to produce this comb, but the Malay cross—often alleged as the source—failed likewise. We also know for a fact, that scores of attempts have been made by other parties to produce the pea-comb by a Malay cross, without effect. These facts seem conclusive, and are often quoted as such by those who hold to the distinctiveness of the Brahma. Yet one indisputable exception in a case of this kind has the force of many; and there are several instances of the true pea-comb entirely independent of any Brahma cross. Many years ago a correspondent of *The Poultry Chronicle* related how he had obtained it by crossing a Malay hen with a Cochin cock—the reverse of Mr. Crook's experiment; and Mr. Joseph Hinton has recorded the fact of having obtained seven or eight pea-combed chickens in one brood, from the very cross between Spanish and Cochin which Mr. Crook attempted in vain. He also states that he has observed "capital pea-combs" more

than once upon his pure-bred Malays, and yet another upon a mongrel whose parentage could not be identified.* In rare instances pea-combs have been observed upon pure-bred Cochins. Lastly, the Sumatra game-fowl has a pea-comb—smaller and less distinct, it is true, than that of the Brahma, but still typical and well marked.

Here, then, we appear further from any definite conclusion than ever, and at first sight it seems as if this vexed question were to baffle every possible avenue of investigation! But, as is often the case, we get our clearest light where we least expect it. Ere we know it, we are getting on definite scientific ground, and there are facts and principles which not only furnish a clue to these apparently contradictory phenomena, but make them actual guides to the issue of our inquiry.

These principles, in some of their results, are known to all breeders, and are seen in daily operation in the return of cross-bred races to one or the other of the original parents. This much, we say, is known to all poultry breeders. But Mr. Darwin, whose facts are most reliable, whatever we may think of his inferences, has also pointed out (we think for the first time) that, besides this, "the *very act of crossing* gives an impulse to reversion, as shown by the re-appearance of *long-lost* characters." That is, not only do the offspring of crossed varieties continually tend to return to one or other of the

* In a letter received since the above was in type, Mr. Hinton informs us that the mongrel in question was a small bird of black-red game color; and also that in April 1869, whilst on a journey, he came across another mongrel bird with a well-marked pea comb. This latter might have been 7 lbs. weight, and like the other, was black-red in color. The legs were dark olive green, with five claws on each foot;—shewing evidently a Malay origin, crossed probably with the Dorking.

immediate parents, but the immediate progeny very often exhibit characteristics *not found in either* of these parents, but which can be traced back either to the primitive wild type itself, or at least to some form far more ancient than the actual progenitors. As this matter is both important to our inquiry and highly curious, we quote the evidence on which Mr. Darwin establishes the fact almost entire.

"My attention was first called to this subject, and I was led to make numerous experiments, by M. M. Boitard and Corbie having stated that when they crossed certain breeds, pigeons coloured like the wild *C. livia*, or the common dovecot—namely, slaty-blue, with double black wing bars, sometimes chequered with black, white loins, the tail barred with black, with the outer feathers edged with white—were almost invariably produced. I selected pigeons, belonging to true and ancient breeds, which had not a trace of blue or any of the above specified marks; but when crossed, and their mongrels re-crossed, young birds were continually produced, more or less plainly coloured slaty blue, with some or all of the proper characteristic marks. I may recal one case, namely, that of a pigeon hardly distinguishable from the wild Shetland species, the grandchild of a red-spot, white fantail, and two black barbs, from any of which, when purely bred, the production of a pigeon coloured like the wild *C. livia* would have been almost a prodigy.

"I was thus led to make the experiments recorded in the seventh chapter,* on fowls. I selected long established, pure breeds, in which there was not a trace of red, yet in several of the mongrels feathers of this colour appeared; and one magnificent bird, the offspring of a black Spanish cock and white silk hen, was coloured almost exactly like the wild *Gallus bankiva*. All who know anything of the breeding of poultry will admit that tens of thousands of pure Spanish and of pure white Silk fowls have been reared without the appearance of a red feather. The fact, given on the authority of Mr. Tegetmeier, of the frequent appearance in mongrel fowls of pencilled or transversely barred feathers, like those common to many gallinaceous birds, is likewise apparently a case of reversion to a character formerly possessed by some ancient progenitor of the family. . . I have been

*This and other references refer to Mr. Darwin's "Variation of Animals and Plants," and are preserved for the sake of those who may desire to study this curious subject further.

informed by Mr. B. P. Brent, that he crossed a white Aylesbury drake and a black so-called Labrador duck, both of which are true breeds, and he obtained a young drake closely like the mallard.

"We have seen in the fourth chapter that the so-called Himalayan rabbit, with its snow-white body, black ears, nose, tail, and feet, breeds perfectly true. This race is known to have been formed by the union of two varieties of silver-grey rabbits. Now, when a Himalayan doe was crossed by a sandy-coloured buck, a silver-grey rabbit was produced, and this is evidently a case of reversion to one of the parent varieties.

"In the third chapter it was shown that at an ancient period some breeds of cattle in the wilder parts of Britain were white with dark ears, and that the cattle now kept half wild in certain parks, and those which have run quite wild in two distant parts of the world, are likewise thus coloured. Now an experienced breeder, Mr. J. Beasley, of Northamptonshire, crossed some carefully selected West Highland cows with purely bred short-horn bulls. The bulls were red, red and white, or dark roan; and the Highland cows were all of a red colour, inclining to a light or yellow shade. But a considerable number of the offspring—and Mr. Beasley calls attention to this as a remarkable fact—were white, or white with red ears. Bearing in mind that none of the parents were white, and that they were purely bred animals, it is highly probable that here the offspring reverted, in consequence of the cross, to the colour either of the aboriginal parent species or of some ancient and half-wild parent breed.

"In the chapter on the horse reasons were assigned for believing that the primitive stock was striped and dun-coloured: and details were given showing that in all parts of the world stripes of a dark colour frequently appear along the spine, across the legs, and on the shoulders, where they are occasionally double or treble, and even sometimes on the face and body of horses of all breeds and of all colours; but the stripes appear most frequently on the various kinds of duns. They may sometimes plainly be seen on foals, and subsequently disappear. The dun-colour and the stripes are strongly transmitted when a horse thus characterized is crossed with any other; but I was not able to prove that stripes are generally produced from the crossing of two distinct breeds, neither of which are duns, though this does sometimes occur.

"The legs of the ass are often striped, and this may be considered as a reversion to the wild parent form, the *Asinus taniopus* of Abyssinia, which is thus striped. As with the horse, I have not acquired any distinct evidence that the crossing of differently coloured varieties of the ass brings out the stripes. But now let us turn to the result of crossing the horse and the ass. Although mules are not nearly so numerous in England as asses, I have seen a much greater number with striped

legs, and with the stripes far more conspicuous than in either parent form. Such mules are generally light-coloured, and might be called fallow-duns. The shoulder-stripe in one instance was deeply forked at the extremity, and in another instance was double, though united in the middle. Mr. Martin gives a figure of a Spanish mule with strong zebra-like marks on its legs, and remarks that mules are particularly liable to be striped on their legs. In South America, according to Roulin, such stripes are more frequent and conspicuous in the mule than in the ass. In the United States, Mr. Gosse, speaking of these animals, says, 'That in a great number, perhaps in nine out of every ten, the legs are banded with transverse dark stripes.'

"The quagga is banded over the whole front part of its body like a zebra, but has no stripes on its legs, or mere traces of them. But in the famous hybrid bred by Lord Morton from a chestnut, nearly pure bred Arabian mare by a male quagga, the stripes 'were more strongly defined and darker than those on the legs of the quagga.' The mare was subsequently put to a black Arabian horse, and bore two colts, both of which were plainly striped on the *legs*, and one of them likewise had stripes on the neck and body.

"The *Asinus Indicus* is characterized by a spinal stripe, without shoulder or leg stripes; but traces of these latter stripes may occasionally be seen even in the adult; and Colonel S. Poole, who has had ample opportunities for observation, informs me that in the foal, when first born, the head and legs are often striped, but the shoulder stripe is not so distinct as in the domestic ass: all these stripes, excepting that along the spine, soon disappear. Now a hybrid, raised at Knowsley from a female of this species by a male domestic ass, had all four legs transversely and conspicuously striped, had *three* short stripes on each shoulder, and had even some zebra-like stripes on its face! Dr. Gray informs me that he has seen a second hybrid of the same parentage similarly striped.

"From these facts we see that the crossing of the various equine species tends in a marked manner to cause stripes to appear on the various parts of the body, especially on the legs."

Now applying these observations and principles to our own subject, we have seen that the pea-comb has been found on the Malay, on the Cochin, on the Malay and Cochin cross, on the Cochin and Spanish cross, on two mongrels, and—though less defined—on the game bird of Sumatra; and in *every case* excepting the mongrel, whose parentage was simply unknown,

(with the almost certainty of a Malay cross in one case) and therefore cannot be considered exceptions, one or other of the *Asiatic* breeds is implicated. In fact, *each of the great Asiatic races*, when crossed, has been known thus to produce the pea-comb by reversion; while a third Asiatic race, which has had the conservative advantage of an insular locality, possesses it still. The conclusion is almost irresistible, that this pea-comb was a leading characteristic of some *ancient race of fowls*, the progenitor of all the gigantic Asiatic breeds. We say a *leading* characteristic; because while in the Malay, an admittedly ancient race, the feathered leg (if such be regarded as one of the original features) has long been lost, and also any tendency to transmit it, the inclination to revert to the pea-comb still lingers; and in the Shanghæ, which is feathered, and is also an ancient race, even the natural instinctive spirit of the male bird has almost disappeared, while still a tendency to this mysterious comb remains dormant in the breed. Very strong and leading must any character have been, to possess such wondrous vitaility and permanence.

And now the question at once occurs, *What was that ancient race?* Was it some breed now long extinct—progenitor alike of Brahma, Cochin, and Malay? or was it, rather, neither more nor less than *the Brahma itself?*

We believe it was the latter.

This hypothesis seems startling, and we believe is altogether new. It was not the opinion formerly held by ourselves; but we were gradually led to it by the evidence we have now laid before the reader, which has been collected during a period of more than three years, and on the ground of which alone it is

now suggested. The real question is, What hypothesis best explains the proven facts? and it will be found that by this theory *alone* can every fact be harmonized with the rest and exactly accounted for. The identity of the crania so justly insisted on by Mr. Tegetmeier, is totally irreconcileable with the marked difference in other points, and the strong vitality of the pea comb as shown by reversion in crossing, on the supposition that the Brahma is a recent descendant of the Cochin; but is quite so if we consider the Cochin to have diverged many years ago from the Brahma. The gentle and quiet disposition of the Shanghæ race suggests that most of the differences observable have arisen from extreme domestication; and the fondness of the Chinese for brilliant colors would account also for changes in plumage. It is well known that breeding Dark and Light Brahmas together often produces a buff tinge, and partridge could be bred in a few years with the greatest ease. So also, a cross back, either to the original wild type of all our fowls (*Gallus Bankiva*) or its domestic descendant, the game bird of India, would produce a breed with long, smooth shanks, hard plumage, and drooping tail, closely resembling the Malay. In this manner each point of agreement, and each of difference, is easily and naturally accounted for.

That the Brahma was an original *wild* type is not of course in the slightest degree probable. But that it is more ancient and less artificial than either of the other gigantic races seems not only certain from the tendency of both to revert to its peculiar comb when crossed, but from the circumstance that it alone of the three still retains the free and active habits and

high courage of a wild bird, with that *clear crow* (only become more powerful from its great size) so characteristic of the cock all over the world.*

The objection that the breed was not imported before, is puerile. Malays were imported long before Cochins, while Cochins had only about two years' priority over Brahmas; and as well might it be contended therefore that Shanghaes were only Malays. We find, moreover, many testimonies to the fowl *having been seen* at different times, such as that of a clergyman who writes in May, 1856, "a relation of mine was looking at my fowls last summer, and on my telling him that Brahmas were considered by many only a variety of Cochins, he remarked, 'I remember Brahma-Pootras when I first went to India, more than *forty years since*, long before Cochins were heard of here: but they were considered a great rarity.'" We could multiply statements to the same effect; and they are also said to have been seen in Ceylon, again implying that the race is so ancient as to have reached various localities. At the present time it is well known there is a splendid large breed of fowls in Japan, but they are not yet "imported," and it may be years before they are.

That the breed—of matchless strength and constitution as it is, should have become almost extinct, is by no means a matter for surprise. We have seen that forty years since they were "a great rarity;" and it is probable enough that the

* Much stress cannot be laid upon it, but it is still worth noticing, that the Malay has never been found to correspond altogether with the old *Gallus giganteus* of Temminck, so that some good authorities have doubted whether so large a bird ever existed as described by that naturalist. We have often thought it, however, far more likely that he was writing concerning some variety of the Brahma.

preference for gaudy colour which produced the more striking plumage of the Cochin, led to a neglect of the Brahma's sober, though beautiful grey. We have also an exactly analogous instance in the black-crested white Poland, which is known to have been both larger and hardier than any of the present breeds, but is now probably extinct, though it was seen by the late Mr. B. P. Brent at St. Omer so late as 1845.

All the facts, therefore, from which scientific deduction can be drawn, seem to point to one conclusion, against which not one argument can be urged. Then, going back to the history of the breed, and subjecting all the evidence alike to independent investigation, we find every account breaks down with ludicrous completeness, save one—confirmed in every point—which traces all to one mysterious pair! Yet there is no change—save in shades of color from the breeder's art—least of all is there degeneracy; the Brahma came upon the scene, and it still remains, the largest fowl ever known. Was ever such a thing recorded of an ignoble race? Would Black Hamburghs, or any other modern creation, so remain? The fowl was put to the severest trial, that of the closest possible consanguinity; and it stood the test—a test which would have extinguished half our breeds.

But lastly, there are many who look to evidences of what they call "blood," and who will ask, Does *the fowl itself* bear out this theory? Does it—as we see it now—bear the impress of such a pedigree as we now suppose?

It does. It bears the stamp of nobility, plainly written. There are exceptions, caused by the past and present mistakes of breeders, and even judges, who would seek to alter it to the

Cochin standard—wretched mistakes these are. But what we regard as the true and highest type of a Brahma cock, is in everything a lordly bird. Largest of all—dwarfing even the Cochin, though his closer plumage and splendidly perfect proportions makes him appear smaller than he really is—he has, when in his prime, neither the heavy look of that breed, the stolid "countryman" air of the Dorking, or the conceited carriage of the Spanish fowl. He belongs to a nobler race; and, colossal though he be, he treads the turf with the grand stride and regal bearing of the Game fowl. No other bird resembles him—no other bird can fight with him—no other bird dare stand before him! And if we ask the reason it is not far to seek: the Game bird too is of royal blood—his pedigree can be traced back for ages.

Surely, then, it is no mere fancier's enthusiasm to affirm that our Brahma too derives *his* strength and courage from his unstained descent. Though never bred for fighting; though he has not, therefore, like the Game cock, in veritable black and white his quarterings to show, surely the evidence could not be more complete. He, too, can boast a lineage as high: the blood in his veins represents the original of the gigantic races: he is "the descendant of a line of kings!"

CHAPTER II.

The Economic Qualities and Management of the Brahma as a Stock Fowl.

IN our introductory sentences we briefly expressed an opinion which we may here repeat, that the Brahma will ultimately be considered to occupy, in relation to other varieties of poultry, a similar position to that of the Short-horn breed amongst the various races of cattle; or in other words, whilst by no means faultless, or combining in itself every possible merit in perfection, that it possesses a *greater* amount of real usefulness and value than any other pure breed, and is also capable in an eminent degree of communicating its good qualities to other fowls by crossing. We have recommended it in many cases to persons whose previous poultry-keeping experiments had not been satisfactory; and in nearly every instance the fowl has fully justified the confidence reposed in it, and *earned* the warm encomiums of the parties concerned. At the same time the bird is *not* suitable for every case, and requires to be understood and rightly managed in order to yield a profitable result.

The progress of this breed in England is a remarkable testimony to its solid value regarded as live stock. Imported, as we have seen, in 1852, it shared in the "mania" (or "hen-fever" as Burnham calls it) which prevailed then and afterwards, and occasionally realized fabulous prices, sharing also with Cochins the comparative neglect which followed. But while the Cochin, so extravagantly lauded at first as destined to

revolutionize English poultry, is scarcely ever heard of now except as a fancy bird, with the Brahma the case is precisely opposite. It has taken time for the fowl to become known, and it was not till five or six years ago that its diffusion could be considered at all general; but a certain point once reached in this respect, its growth in favor among *the people* has been the most extraordinary poultry phenomenon of late years. Without anything approaching "mania," the entries each year have steadily increased, until at many shows the Brahmas now form the most numerous classes exhibited; and at the Royal Agricultural Society's Show in 1867 the breed ousted even the Dorking from its long-held position, and was justly elevated to the first rank as agricultural poultry stock. And not only in England has this been the case, but there is a continuous and steadily increasing demand for good birds both from America and the Colonies. Mr. Teebay lately informed us that whatever chickens he could spare were always wanted for the American market; and a fair number of our own stock are now living, and we trust thriving, in Australia.

A fowl which could thus grow in general popularity must have many recommendations; and in proceeding to describe the economic qualities of the one in question, we may briefly characterise it as remarkable alike for a handsome appearance, great size, good quality of flesh, extraordinary fecundity, remarkable power of adapting itself to the most varying circumstances, and finally, an iron constitution.

The first point mentioned is not perhaps very material to the present chapter, besides being greatly a matter of opinion; and as we have already described the carriage of the male bird

as resembling that of the Game-fowl, we will here only add, that the head of a well-bred Brahma pullet is more beautiful in shape and expression than that of any other breed whatever, leaving the rest to the remarkably faithful portraits which accompany these pages.

As regards size, however, we quote veritable facts when we affirm that the Brahma surpasses all other breeds, not excepting the gigantic Cochin. It is, indeed, apt to look smaller than the latter, on account of the plumage in good strains being much closer than that of the Shanghæ; but stature and the scales tell a different tale. We have bred many cocks which in their second year (the Brahma continues to grow during the second season) reached thirteen to fourteen pounds, and we have been told by Mr. Teebay of a cock he once had, which when dead reached the enormous weight of nearly *eighteen pounds!* We have seen several hens which weighed over 12 lbs., but the heaviest we ever had in our possession was 11½ lbs.; we have had several 10 lbs. If it is remembered that all these birds were weighed as they ran in the yard, and that the fowl is greatly free from that tendency to fatten so characteristic of the Cochin, the claim of the Brahma to be considered the largest known race of poultry will be readily allowed.

Such weights as we have mentioned would be far more general were the fowl bred for size as the Dorking is; the present system of poultry exhibition making accuracy of feather of such paramount importance, that it is often necessary to breed from small birds in order to secure it. At present the fair average weight of Brahma chickens at six months old, unfattened, but well fed in their runs, may be considered as

8 lbs. for the cockerels and 6 lbs. for the pullets. With a good run and the *best* feeding, some of the cockerels will reach even 10 lbs. at that age, and the largest pullets, perhaps, 7½ lbs.; but a fair average weight for the mature birds will be for the cocks 11 lbs. to 12 lbs., and the hens 8 lbs. These are all given as the weights of unfattened birds with a fair amount of exercise: if penned and fed well with soft food, they will often add the fourth of their weight in a few weeks; and when it is considered that the fowl which attains such a growth may be reared with moderate care, even in January, with scarcely a single death save from accident, the advantage so far over all others is most apparent.

The quality of the meat is also good. We have often heard it stated that the Brahma "is not worth eating;" and there are birds which, by carelessness, or a cross with the Cochin, have degenerated into coarseness of flesh; but whenever even tolerably well bred, the fowl will be found almost, and very often quite, equal to the Dorking. There is probably a little, and only a little, less meat on the breast, but this is compensated by the extra quantity and *quality* of that on the thighs; indeed many people think the leg of a Brahma cockerel one of the best parts of the bird, and this great improvement in what is the coarsest part of other breeds, counts very much in estimating its value as a table bird. Altogether, the fowl on the table is infinitely superior to nine-tenths of what can be purchased at any poulterer's, and the skin should be either white or of a delicate pink color.

We have a letter from Mr. F. Crook to the same effect. "The flesh of a good Brahma," he says, "when cooked, is as

white as that of any Dorking; and with all the vaunted superiority of the French breeds, I will engage to produce with my birds, heavier fowls, flesh of equally good quality, and with the finer parts equally well developed, with any stock they can produce." We must in fairness admit that we think Mr. Crook a little too laudatory here, the La Flèche having, to our fancy, a juiciness only equalled by the Game-fowl; but this breed is totally unsuited to our climate, and inferior in every other point; and that the Brahma can be bred equal to any other of the French races we are persuaded. We had recently a good opportunity of fairly testing the table value of our own Brahmas as compared with Houdans, having hatched and reared some Houdan cockerels in the same brood with some of our Brahma stock, and had one of each on the table together. The Brahma had quite as much breast meat, the quality was fully as good, and the quantity at least half as much again,—a very great point this last in rearing for the market.

Judges have perhaps been somewhat in fault respecting this point also; for in many cases the bird, owing to the decisions of arbitrators who do not understand the breed, has been bred unconsciously towards a Cochin standard, and the quality of the meat and proportions of the finer parts been thereby alike deteriorated. We are writing of the Brahma as it is *when unspoilt;* and while bound to admit that it cannot equal the Game fowl, and perhaps the La Flèche, in the sapidity of its flesh, our own experience is, that no other fowl surpasses it even in these points, while it has also upon the table a noble appearance which ought to go to the heart of materfamilias at once.

The fecundity of the hens and pullets is very great. The production of eggs is interfered with to a considerable extent by the propensity to sit; but notwithstanding this, when the birds are kept simply as stock, we consider each one equal to the production of nearly 150 eggs per annum, which is a very high average.* The tendency to incubate varies greatly in different individuals; we have remarked even two sisters, hatched in the same brood, one of which only laid about twenty eggs before desiring to sit, and the other more than fifty. But in nearly all Brahmas there is this peculiarity, which we do not think has been before noticed, that the hens in their second year lay very much longer than the pullets. For instance, a bird of our own which we greatly valued for breeding, and which as a pullet never laid more than about thirty eggs at a time, began her second season before Christmas, and continued to lay five or six eggs weekly, without stopping or showing the least desire to sit, until early in April. The difference is perhaps only seldom quite so marked as this, but is nearly always very considerable, and makes the fowl as a layer far superior to the Cochin, or indeed nearly any other.

Another great advantage in this breed is, that if broods are not wanted, the tendency to incubation, unlike the Cochin, is very easily checked. If the bird be taken from the nest *at once*, and put in a box-coop, or under a basket-coop on hard ground, with plenty of water but little food, two days will often effect the purpose, especially if two birds can be thus cooped together,

* Many single birds of the Hamburgh or other breeds have been known to lay much more than this: so have Brahmas; but *the average* production of the stock is the real test of a breed. In this the Brahma will equal any.

as their quarrelling will assist in the task. If allowed to sit on the nest a few days before being noticed, a week's confinement may be necessary, and in less than a fortnight the bird will usually lay again. It is always best to check the propensity for at least the first time it occurs, and that *instantly*, unless the pullet has laid on into the new year; for if the bird was hatched early, and desires to incubate, as she probably will, in the autumn, she will often, if allowed to remain on the nest, suffer a *second moult* the same year, which will not only be a very severe drain on the constitution, but may hinder any further supply of eggs till late in the spring. Mistakes of this kind will greatly affect the produce of the fowl. Moreover, Brahma pullets are not to be recommended in general for very early broods, as they usually lay again in about a fortnight after hatching, and consequently totally abandon their chickens at about a month old, when they are far too young to shift for themselves. In May broods, however, this is no drawback, and they commonly sit very steadily. The adult hens as a rule are exemplary mothers in every way, and will generally go with their nestlings about two months, after which with ordinary care even early chickens will do very well if brought into the house at night. Where many are reared, the pullets may be employed even to hatch early broods, as no breed is so good-natured and easily imposed upon by foster-children. If therefore a second bird that has just hatched only a few chickens be cooped near the one about to forsake hers, a transfer is in most cases easily effected, and the chicks thus protected some weeks longer. As Brahma pullets lay with great regularity at six to seven months old, and usually sit

within two months after, they may thus be made exceedingly useful where a regular supply of early birds for market is desired. Indeed, no breed so eminently possesses the merit of regularity and certainty in the time of incubation, without carrying it to a troublesome excess as is the case with the Cochin. Some few hens may be clumsy, breaking the eggs or crushing the chickens; but as a rule we have found the fowl more free from this fault than any other bird of the same size, and have set the largest hens on Bantam eggs ere now without any evil result.

The constitution of the chicks, when bred from *mature birds*, is excellent. This point, as all fanciers know, has great influence on the matter in every breed; and we think Brahmas have suffered perceptibly of late, in common with other varieties, from the common practice of breeding from the last year's chickens. In breeding for exhibition this is to a great extent unavoidable; but where Brahmas are kept as farm or market stock, it will be found far the best to breed chiefly from fowls which on one side at least are in their second year. The chickens will then be nearly fledged and out of all danger at about seven weeks old; but if bred from cockerels and pullets mated together, as is frequently done, they will be very long over the process, and often require much care. The little cockerels in this case suffer more than the pullets, being often nearly bare before the true feathers appear, and consequently much stunted in growth, so as to be considerably smaller than the pullets in the same brood. Chickens thus bred, in fact, ought not to be hatched before April, when their parents will not only be a year old, but their tedious fledging causes

little danger. The progeny of adult birds cannot possibly be surpassed in hardihood, and may be reared with hardly a death in the yard, if care be only taken to guard against cramp or rheumatism in the legs during early seasons; and at three months old the cockerels will weigh from $3\frac{1}{2}$ lbs. to $4\frac{1}{2}$ lbs., occasionally even more.

It will be seen then, that the Brahma has many and great merits, and takes high rank as a stock fowl, either for the supply of eggs or table use. But it will not answer in every case. In those special localities, for instance, where the taste of the public is so depraved as to insist upon *fatted* birds, the Dorking will be found far more remunerative, having a natural aptitude to accumulate fat which the Brahma (happily, to our liking) does not possess. If *meat* of good quality be desired, our fowl will well bear comparison; and it is a great advantage to be able to kill early chickens of a good size, without any extraordinary feeding or care; but as a grease-producer it cannot compete with several other kinds. For this reason, independent of the senseless prejudice against *all* feather-legged birds, the breed would probably be found not well adapted to the London market.

The objection to feathered legs might be easily removed, and birds totally without feathering bred in three years, by a little care in selecting breeding stock; but such would scarcely be *Brahmas* as now known, and we should certainly regret the change. We have however often thought that, thus modified, and with the legs whitened, which we have proved in our own case could be done very quickly by keeping on calcareous ground, the bird might perhaps take *another name* and render

essential service to the English farmer. Somewhat more length of leg would harmonize well with such a type of bird, which would we believe meet with less prejudice than the present feather-legged breed; and the result would be—not *a Brahma* certainly, as we are now writing of it—but a noble fowl of the same race, larger, handsomer, hardier, stronger, and more prolific than the Dorking, and with the noble carriage of our English game—a breed, in fact, just suited to the British mind. We have now and then bred accidentally birds which came very near such a description, and think the experiment well worth suggesting to those who have room to carry it out.

Again, where eggs *alone* are wanted, the Brahma does not answer; for if resolutely kept from having even one brood in the season, the poor bird often pines away and loses constitution through the excessive drain on its productive powers and the continual denial of its strongest instincts. Disappointment has frequently ensued from this cause, and the breed should never be kept under such circumstances, but Spanish or some of the French breeds be selected. It is only where some fair proportion of chickens are wanted that the fowl shows to advantage: then, be the soil dry or damp, the aspect cold or warm, the space unlimited or confined, it will thrive apace, and with ordinary attention produce a greater pecuniary return than any other we are acquainted with.

Should circumstances hinder the incubation of any particular hen, she should be allowed to sit for about six weeks on nest eggs, taking her off once daily as usual for the first half of the period, and during the latter twice, in order to prevent her

being too much reduced. By this process, skilfully conducted, the rearing of chickens may in some cases be dispensed with; but it requires some practical knowledge of fowls, and very careful attention to the health, condition, and disposition of each hen, to make it take the place of the natural process, which should be always allowed when possible.

Another reason in favour of allowing each bird one brood, is that all the feather-legged breeds are somewhat prone after two years to accumulate fat internally. The Brahma is far less liable to this than the Cochin; but still, in confinement, unless our directions for feeding be attended to, it is apt to occur. In this case, as is truly observed by Mr. Crook, (who has paid great attention to the subject) "the first parts to suffer are the egg organs. The birds gradually become what is called by poultry-men *down behind*, and if the tendency is not checked the weight becomes so great that the hen walks about with her hinder parts nearly on the ground, Penguin-fashion, until at last actual rupture of the egg organs takes place." Death may follow or not, according to the violence and extent of the lesion; but even if it survives the bird is of course valueless for breeding. "Whenever such a prejudicial tendency to fatten is noticed"—we again quote Mr. Crook—"the best possible course is to let the hen keep to her nest for at least a month whenever she becomes broody, only feeding her once a day, and taking care that after hatching she does not get much food with her chickens. By this rest of the productive system, combined with abstinence, the parts will often be brought back to their natural condition, and a cure effected." Prevention is however the best remedy, and

if the birds are fed as already recommended, such a condition can scarcely occur, as is proved by the fact that in our own experience we have never had a single case.

Candour also compels us to acknowledge, that Brahma cocks crow very often and *very loud;* and this will be a fatal objection in some cases where the fowl might otherwise be kept with profit. As Burnham says (falsely) of their eating, "they are amazingly fond of *crowing*, especially a *good deal of it;*" and this quality does not make the breed the most eligible for a town. We can only say that the crow is at least, in most cases, genuine and clear, not a hoarse guttural growl like the Cochin's; leaving the reader to give the objection just what force he may.

The chickens, like all other fast growing fowls, have considerable appetites, though they *won't* eat "old hats" so far as we have observed. But the adult Brahma does not require a great amount of food, not nearly so much as the Cochin or Crêve Cœur, and scarcely so much as the Dorking. We have always found our own birds, when barley was five shillings per bushel, and other cereals in proportion, cost us about 1½d. per week each, having to purchase every smallest morsel they consumed, and of the best quality, as all poultry food should be. If there be foraging ground they can be kept for less. Even in the confinement of a town, therefore, the Brahma will yield a good return provided a brood can be allowed to each hen. When thus kept, however, they should be so fed, at only two meals per day, as to be *always* eager for food, even at the end of a repast. We have had visitors remark that our birds "must be half starving," as they saw the hens fly up a yard in

the air when their breakfast was taken out to them; but we have found by experience that this system of keeping them is the best, not only for profit, but for real healthy condition. In bad or cold weather, a little more should be allowed; but we *never* allow our own fowls (except by oversight) to eat to repletion. In a confined space such would always destroy the profit of keeping poultry: it causes laziness, where it is more than ever desirable that the greatest possible amount of exercise should be taken. We do not mean of course that the fowl should be really *starved*, but simply that the supply should always be stopped whilst "on the sharp side of its appetite." On this system the Brahma can be kept in places where no other variety would live six months, and will yield an unfailing supply of fresh eggs when most wanted.

The farmer should seek to breed his own birds, as he will probably find no exhibition strain, for reasons already stated, which combine the merits of the fowl to nearly so great an extent as may be the case with a little care in breeding to a table standard. Many Brahmas will occur, for instance, with the narrow Cochin breast; and some may be found which, owing to a cross, have acquired the objectionable yellow skin, and coarse flesh which usually goes therewith. But by selecting stock with good deep breasts, short legs, and white skins, also looking out for a small and pretty head, and by rejecting for a few seasons the most faulty birds in these points, the real merits of the race will appear. It cannot be too often repeated, that to be a first class table fowl, a fowl *must be bred for the table.* The Dorking has long been so bred, and has been judged by size and kindred points, hence the size and

proportions have greatly improved. The French breeds have been matured in a similar way. And we have satisfied ourselves fully, in the course of a careful study of the Brahma, that while owing to these circumstances, there are varieties which, as they stand, somewhat surpass it for table qualities, our fowl really possesses higher qualifications in this respect, in *proportion to the degree in which they have been cultivated*, than any other race known; and that the most moderate attention from the market breeder would raise it to the very highest place in these special particulars.

In thus keeping the fowl for market purposes or for home use, a profitable result cannot fail if the preceeding hints be duly attended to, and which may be summed up in a few lines. The breeding stock for the early spring should consist, on one side at least, of birds in their second year; cockerels mated with pullets not being bred from till after April, and only fine, large-boned, vigorous birds being even then allowed to furnish eggs for the nest. Care should also be taken that such young birds are then selected as had *fledged rapidly* when chickens, as this point is apt to prove hereditary, and slow fledging is a great drawback to rearing. A pullet's *first* eggs should never be set, and unless she has been laying far into the spring, the pullet herself should be *instantly* checked the first time she desires to incubate; but however often the tendency be frustrated, each bird should be allowed one brood before June. Finally, at least one half the stock should consist of hens in their second year, from the fact already stated that they lay better at that age than either before or after. The eggs of hens are also of much larger size.

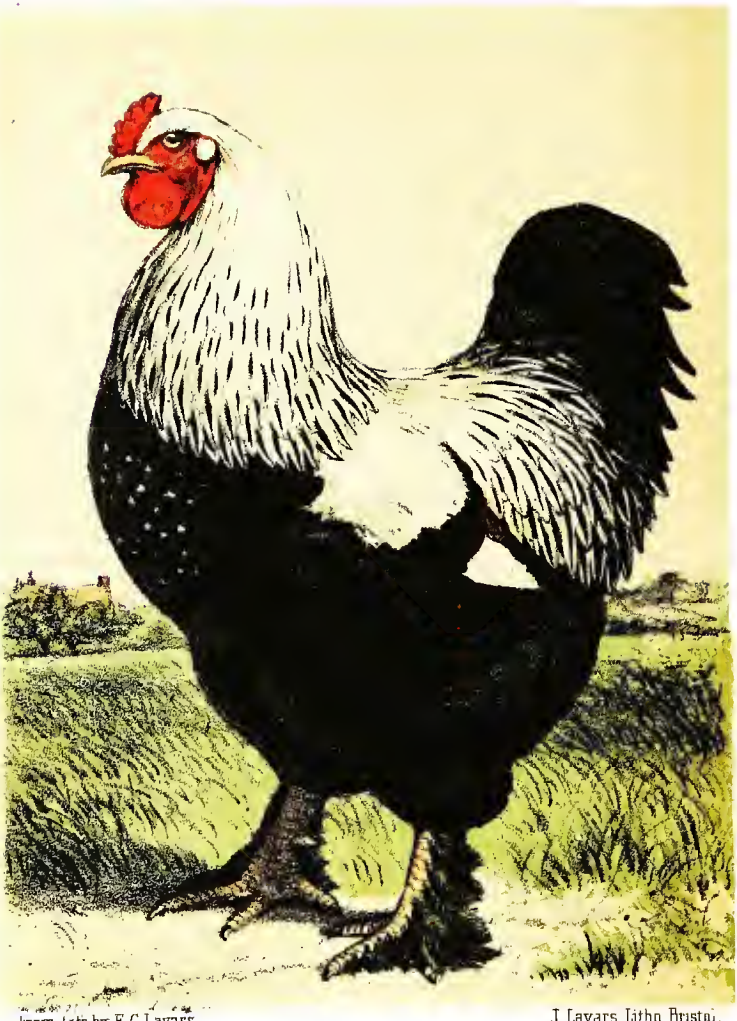
When kept for eggs, the stock should be selected in the same way from birds which lay the largest, as they differ greatly in this respect. The average size of the eggs is about the same as the Dorking; but some are no larger than those of Cochins, while on the other hand many birds lay eggs equal in size to those of the Spanish fowl. Over-feeding, which has already been condemned on other grounds, lessens the size of the eggs materially.

The chickens will do well on good plain food, such as oat-meal for the first week or two, and afterwards sharps mixed with barley meal. They will yield a good return for milk if it can be afforded. The cockerels pay best if killed from three to four months old; but are splendid fowls up to ten or eleven months, often appearing as large as an average turkey on the table: indeed we prefer them dressed and served up in the same way. The pullets are delicious, being full of delicate white meat on the breast, of better flavor and more juicy than that on the Dorking fowl. The strains with the *smallest and handsomest heads* are almost always the best in fineness of flesh—at least so we have always found—a coarse cruel-looking head being generally a sign of the opposite quality. This is singular, as it is often the last sign of a remote Dorking cross; but it corroborates the generally received idea, that while many first crosses are good, subsequent generations as a rule retain more of the defects than the benefits introduced by the experiment.

The first cross of the Brahma with a Dorking cock certainly produces truly magnificent fowls; the largest, perhaps, that have ever been reared. Chickens thus bred have been shown at six

months old which weighed over 18 lbs. the couple. By crossing this mixed race again with the Houdan cock, chickens are obtained which, though less in ultimate weight than the half-bred Dorking, attain a still earlier maturity, and may be killed at ten weeks old of very good size. Both of these crosses are well worth the attention of the farmer or market-breeder; but their merits should be kept up by continually using the blood of good and pure stocks, or the result, unless great judgment is exercised, will be disappointment and deterioration.

Lastly, while all Brahma crosses make good layers, the cross between a Brahma hen and a Spanish or Minorca cock produces a fowl, generally black on the body, with dark striped hackle, which for average fecundity surpasses any and every fowl we know.



From Life by E.C.Lavars. J. Lavars, Litho. Bristol.

DARK BRAHMA COCK
"CHALLENGER"
THE PROPERTY OF KEITH JOPP, ESQ.

CHAPTER III.

The Characteristics of Dark and Light Brahmas as bred for Exhibition.

AT various times considerable difference of opinion has prevailed as to the correct standard to which the Brahma fowl should be bred, not only in color and leg-feathering, but even in shape; and on some points we have ourselves seen reason to change opinions we formerly held. In attempting to define, therefore, the proper characteristics of perfect and pure-bred birds, we shall endeavour to indicate, directly or indirectly, where there is room for diversity of judgment; to give due weight to opinions that do not precisely coincide with our own; and, so far as our ability extends, to afford such information as may assist those who differ from us, while giving what we think solid reasons for our own views.

With regard to such disputed points, there is one general remark to make. Every breeder should by all means make himself acquainted with the proper characteristics of his favorite fowl, and have in his mind a definite idea as to the standard of perfection after which he aims. If such ideas have been formed intelligently, and on good grounds, they should not be lightly given up for the fashion of the hour, which can often not be depended upon longer than that of a lady's bonnet. It will often be better, and in the end even

pay better, to sacrifice some prizes for a year or two, than to "give in" to the present fancies of second-rate judges, and *degrade* a stock in order to meet them. He is no true fancier—he is altogether unworthy the name—who merely seeks to win prizes: still less is he one whose only object is "to have the best stock in England, and beat every one else," as is the case with those who "decline to sell eggs at any price"—a miserable spirit and a miserable ambition this. For far higher ends do the real brethren of the craft breed and show their fowls. They believe that the feathered objects of their interest are calculated to render important service to their country; that poultry is an important link in God's grand economy of nature, and destined to play no small part in that great "*food question*" which is ever pressing more deeply on the minds of those who study the social welfare of man; and they patiently work and study, each in his degree, so to improve and maintain their favorite breeds as may make them better adapted to serve mankind, while at the same time their exceeding beauty shall be so increased as to render them still more attractive in the eyes of that softer sex to whose care and supervision they are so particularly adapted. One who works with such objects—and many do—will always be unselfish. When a brother fancier shows at last a better pen than his own, he will rejoice that a step has been gained; and whatever knowledge he may have acquired will be cheerfully and readily communicated. A real fancier is a true patriot; and if Jonas Webb is remembered and extolled for having improved the wool and increased the carcase of the sheep to

which he devoted such attention, men like John Douglas, who raised the standard weight of the Dorking fowl several pounds over what was known before, or Mr. Hewitt, who has devoted years of his life gratuitously to aiding, by his vast experience and knowledge in awarding prizes, the general improvement of poultry, have also deserved well of their country, and done good work for their day and generation.

To breed to a really faulty standard, therefore, against the better judgment, is to give up all this for the sake of gain; and in the end no advantage will accrue, as the error usually cures itself within a short time, and then those who have pandered to it will have some trouble in recovering their lost ground. There was a remarkable example of this in the case of our Brahma fowl. A few years since, dread of the vulture hock was carried to such an absurd extent, that almost *bare legs* became the fashion, and well-feathered shanks could scarcely win, except before one or two of the best judges. Nearly all were carried away by the stream; so much so that we ourselves, beginning to breed at that time, could not get darkly pencilled birds even moderately feathered at any price. But it did not last. After a season or two the tide turned; those who had given way to it had to *get back* the lost feather as best they could; and we are sorry to say that many of them did not scruple to breed *hocked* birds, and show them with the hocks plucked, in order to wrest the prizes from those who had bred fairly, and were not willing to use such means of gaining exhibition honors.

But on the other hand, it should not be forgotten that such

fixed ideas as we have been advocating may be *carried too far*. We have said they should not be lightly given up for the fashion of the hour: but there is such a thing possible as riding a hopeless tilt against the collective judgment of all else beside. This can never succeed, and is to be avoided: as in most things, so in this, the middle path is the safe one. If for years the opinion of breeders, and of the best judges, sets evidently in one direction, it is seldom wise to attempt to resist it, as has been the case with several individuals we could mention. Except there be very strong reason for it, such a course will at length degenerate into mere ignorant obstinacy, and can only result in continuous defeat. We value our own opinion, and we would have every one else to value his; but the opinions of others, when time has been given to test them, must in all cases be treated with respect; and in most instances, when they do really appear to be mistaken, they can be, if not too recklessly opposed, so modified as not to be injurious.

In shape, style, and carriage, the Dark and Light varieties of the Brahma should be precisely similar. Some few years since the Light variety had degenerated greatly in these particulars, owing in our opinion to the comparatively few who bred it in comparison with the Dark; but of late magnificent specimens have been shown, and Light Brahmas now bid fair to rival the Dark, not only in size and shape, but in general popularity. The following remarks with regard to shape will therefore apply to both breeds.

The head of the cock cannot be too small in proportion to the body. Scarcely a point is of so great a value as a sign of

high breeding; and as we have before remarked, we have also found that as a general rule a small head is accompanied by fineness of flesh, which in a breed like the one in question is a point never to be lost sight of. The top of the head should be rather wide, causing a slight fulness over the eye, which in the pullets causes that peculiarly arch expression for which they are remarkable, and which the cock should partake of to as great a degree as possible. The eyebrows must on no account, however, be so prominent as to cause a cruel or Malay expression. The whole head should be rather short, a long head looking bad, and disfiguring many of the present Amercian birds.

The pea-comb is peculiar, but is simply described as resembling three small combs joined into one, the centre one being higher than the two outside. It is very difficult—in the cock especially—to get this point into perfection until a strain has been bred for years. No pure strain indeed ought to breed a solitary comb in which the peculiar triple character is not perfectly distinct; but there is a constant tendency to grow too large, or crooked, or otherwise misshapen, which requires to be guarded against like any other fault, if even tolerable symmetry be desired. We remember once seeing a cup cockerel, in which the triple character of the comb was just discernible, the member resembling an almost shapeless mass of red putty, the size of a moderate egg, and hanging considerably over on one side. We would never, as our previous remarks have shown, press a merely fancy point too far; but considering how highly typical the pea-comb is in this breed, we would never breed from such

a bird, and would hesitate much to award a first prize to one, though combs far short of perfection must often be tolerated for the sake of more important points.

In a perfect comb the centre ridge should be absolutely straight, and the whole so low as to be perfectly firm and free from shaking, however quickly the bird moves his head. We would prefer half-an-inch in height, but even three-quarters, if straight and well-shaped, makes a beautiful comb: above that we should say there was a tendency to getting too large. With regard to the shape of the comb opinions differ. Some prefer a uniform rise from the front towards the back, ending in a peak something like that of the Hamburgh, though not so sharp or defined; and this is the original and present American type. But we like far better to see the comb, after rising for half or two-thirds of its length, decrease again towards the back, thus forming a kind of arch; and this form of comb not only, as we think, looks better to the eye, but is far more likely according to our experience to breed well than the other, which has a tendency to grow larger each successive generation.

In our first chapter we have explained that the original Brahmas bred both single and pea combs. Dr. Gwynne and some others perpetuated the single comb, but the pea-comb soon became the favorite, and was *easiest bred*, proving it to be the most natural to the breed. Since then the single comb has all but disappeared, and never in any class now receives prizes at shows; but there were till very lately some splendid yards of single-combed Light Brahmas in existence; and the Messrs. Ede, of Worthing, in particular, were celebrated for

a magnificent strain of single-combed birds, which we think would run some of the present exhibitors a close race for prizes.

The comb should be handsomely set above neat and cleanly cut nostrils, the beak being rather short, thick at the base, and with a rather decided curve: but too much curvature, or what is termed a hawk-bill, is a great blemish, giving a sinister aspect to the bird.

In all the original Brahmas the deaf ears fell below the wattles—and this point was even mentioned by Dr. Bennett as a characteristic of the breed. It is often seen so still, and its perpetuation should be carefully sought as far as possible; but a prominent place cannot of course be given to so secondary a character.

Just below the head, the neck hackle should start well out with a full sweep, making the point of junction between the head and neck very distinct by an apparent hollow or depression. The hackle can hardly be too full in our opinion, and should descend low enough to flow well over the back and shoulders. Perfection in this particular adds very greatly to the noble carriage and appearance of the bird, while a scanty or too short hackle is a decided fault, though it may be occasionally condoned for the sake of other points.

The proper length of neck in a Brahma cock is a little disputed. The *Standard of Excellence* says it should be long, whilst Mr. Boyle, for several years the most successful exhibitor in England,* says that it should be "rather short."

* See his description of the Dark Brahma in "The Practical Poultry Keeper," page 108.

The latter definition harmonizes best with the present usual type of bird, and in most cases accordingly looks best; but it does not therefore follow that Mr. Teebay (who drew up the definitions in the *Standard*) is wrong; the fact being that since his time the style of the fowl has been altered, rather considerably to a discerning eye, and tending much more to the shape of the Cochin, especially in the more horizontal position of the tail. In such birds a short neck looks best; and we always thought the *Standard* wrong until we had an opportunity of seeing a Brahma cock of the true old type, with the nearly upright and "black-cock" tail once so common, but now rarely seen. Since then we have agreed with the *Standard*, and regard a rather long neck, if well arched and with full hackle, and joined with the old proportions and shape of tail, as making a far nobler-looking bird. Such cocks are now rarely met with—indeed, were it not for the efforts of Mr. Hewitt and Mr. Teebay, who have striven almost single-handed to maintain by their decisions, we might almost say to restore, the true characteristics of the breed, we believe they would have been irrecoverably lost, so rooted has been the desire of most breeders to produce birds as much like a Cochin as possible—but when once seen their lofty stature and bearing is a thing to be remembered. With regard to this matter, therefore, as things are a short neck is often to be preferred, especially for exhibition; but if the breeder seeks the older and more genuine type, and succeeds in obtaining it, a bird with the longer neck described by Mr. Teebay will be in his eyes of greater real value, though he may not so often win.

The back should be wide, and flat across, with scarcely any apparent length, the saddle appearing to rise almost from the base of the hackle. A round back is a great deformity, and a very narrow bird is not to be tolerated in a pen. The saddle cannot be too broad, and ought to *rise* well towards the tail; without this there cannot be true symmetry and proportion. Perhaps no point in the shape of the cock has been so deteriorated of late years, many cocks being shown with narrow saddles quite destitute of rise, but forming a rather sharp angle with the tail. We have also seen cocks with the back and saddle sloping down towards the tail, which looks particularly bad, being contrary to the haughty carriage so conspicuous in this breed. The lowest part should be in the middle therefore, with the saddle and rump carried well up to balance the base of the neck. The longer the saddle feathers are the better.

The tail of the Brahma cock originally was very peculiar, but it is now become exceedingly rare to see it approaching perfection. Most breeders appear to aim at the horizontal soft tail of the Cochin, with which the short neck (as already observed) has become associated, and the appearance of the fowl thus greatly altered from what it originally was. Such tails are therefore admissible enough for exhibition, and it even remains to be seen whether the true Brahma tail can be restored; so that meanwhile the fancier must breed and show the best he can get according to his own ideas. The great difficulty of getting back the old type may be imagined from the fact that we have in our possession a letter from a well known Birmingham winner, stating that he thought such

tails exceedingly ugly, and "never bred from such a bird!" We still, however, see rare specimens; and if Mr. Hewitt and Mr. Teebay should be spared to act as arbitrators, we do not yet despair of having the noble Brahma cocks once seen again worthily represented at our shows.

The proper and characteristic tail has been variously described, but most usually it is stated that "the sickles should open out into a fan." Sometimes it is said that the whole tail should thus open, and the usual standard of comparison has been the tail of the black cock. By the kindness of Mr. Teebay, however, we are able to give a clear description of the caudal appendage as it used to be, and which we must regard as the perfect *standard* or type, however we may fail to approach it now. "The true inside tail," he says, "I like closed, except the two highest feathers (sometimes *four* used to be so). These should be very broad, and lay nearly or quite *flat*, not too long, and the ends turning outwards each way, and projecting on each side *through* the curved or sickle feathers. Such feathers are never seen except in tails set much more upright than most exhibited now. They were very subject to be broken in the exhibition baskets or pens, on account of their projecting through the other feathers. The whole inside tail spreading out, as was also often seen, I do not like. I have frequently noticed the feathers crossing in the lower part and *re-crossing* again higher up, as in the sketch. When there are two pairs the higher pair is generally rather smaller, and they do not actually cross, though there is always a similar peculiar bend, which is I believe caused by their being set into the rump so

Fig. 3.

Black-cock feathers from tail of a Dark Brahma cock, drawn from a sketch and actual feathers supplied by Mr. Teebay. Two-thirds natural size.

near to each other, and growing together whilst the young quill is hardening."

We add a drawing of these black-cock feathers, from a sketch and actual specimens kindly sent us by the same eminent judge and breeder, and which once belonged to some of his old birds. If the drawing be raised till nearly upright, what is meant will be readily seen; and the resemblance to the tail of the black-cock will appear far more striking than if the whole tail be opened out like a fan. Indeed, the heads of the pullets, the character of their pencilling, and the tail of the cock, with the feathered shanks of both sexes, present a cumulative amount of resemblance to the grouse, which furnishes one of the most singular examples of what Mr. Darwin calls "analogous variation" in widely different species, known to us throughout the whole range of natural history.

The breast ought to be deep, full, and broad, if rather projecting so much the better. The breast-bone or keel should be deep and well down between the thighs. The shoulders of the wings should not be too sharp and prominent, but sufficiently so to make the back, when the bird stoops, a little hollow from shoulder to shoulder, and give a handsome proportion. The wings should be of medium size, and well tucked up under the saddle feathers, their points pressing tightly into the fluff on the thighs. If the cock is thus perfect in his "side-rigging," the effect—in spite of his size—will be particularly neat and trim. A slipped or disordered wing is a very great blemish, and tells greatly against a bird, however perfect in other respects.

The thighs should be furnished with an ample supply of

the plumage so well described as "fluff," but somewhat harder and more compact than in the Cochin. The lower feathers should in our opinion cover the hock joint, but curling well round it. Some breeders seem still to prefer the bare hock, or anything rather than get an occasional falcon hock: but general opinion is now returned to the former dictum, that the hocks of feathered fowls should be well covered with soft curling feathers. Falcon hocks are to our fancy a great eyesore; but only stiff feathers, projecting so as to form a prominent spur upon the limb, are to be so regarded; and we would rather that even this should be permitted, than the disgraceful practice of fraudulent plucking, which we regret to observe has lately been practised by even eminent breeders, should become more general.

The shanks ought to be short and as well feathered as possible, so the bird be bred honestly without showing vulture hock. Both the outer and middle toes should be feathered; but sometimes very heavily feathered birds have the middle toe bare, and are not therefore to be discarded. We have also frequently seen the inner and back toes feathered, but very seldom unless the bird was hocked.* The shank feathers should *stand out* as much as possible; for if the direction of them be perpendicular they do not "tell" properly, and the shank near the hock looks much more scantily furnished than at the feet, which has a bad effect.

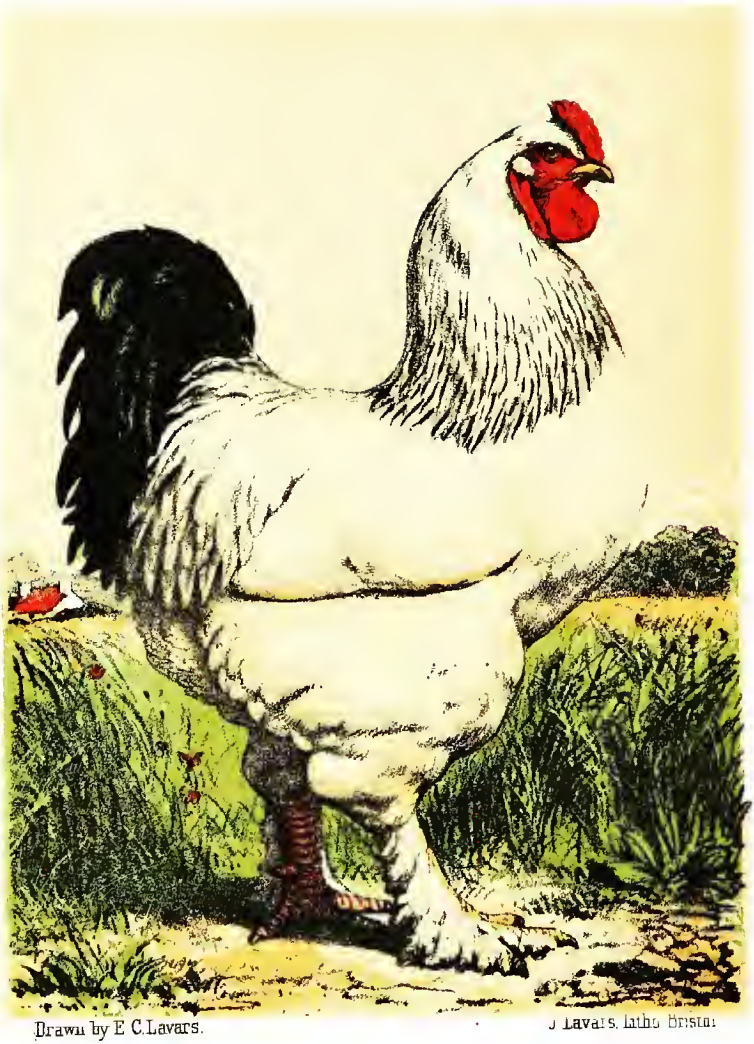
* The only exception we ever knew was in the case of a bird we bred ourselves this season, now belonging to a friend in Scotland. This cockerel had both inner toes heavily feathered, but was perfectly free from hock, and won the first prize at the Highland Society's Show (in 1869).

We used to think a Brahma cock could not be *too* short on the leg: but we did once see a bird which we thought was so, and looked positively awkward. It will be very hard, however, to fail in this respect; and all approach to legginess is a blemish, though not so much so as in the hen, or so important. Leggy birds often win if very superior in other points, but should be within the bounds of tolerable symmetry to do so. The thicker the shanks are the better, small shanked cocks rarely breeding large birds. Long legs are frequently associated with too long a back and other defects in shape.

The shape and carriage of the hen should correspond with that of the cock, allowing for the difference of sex. Her head should in particular be as small as possible, this point being of much greater moment in her case, with the same slight fulness over the eye, giving to the face an expression we can only describe as "arch," but at the same time peculiarly sweet and gentle. We like the head short and well arched; in fact, as already said, almost exactly that of a grouse, with the beak also rather short and curved, but not too much so. The neck in her case short, and with the hackle spreading out very full at the base, and flowing well over the back and shoulders. The back flat, wide and short, as in the cock, with a very broad and ample cushion resembling somewhat that of the Cochin. There is however this difference, which is characteristic, that whereas the cushion of the Cochin rather droops at the extreme end, burying the tail, the cushion of the Brahma rises to the last, the short tail rising nearly upright out of the end, so that the lower feathers of

the tail are further behind than the upper. Many of the pullets lately shown have been nearly destitute of cushion, and narrow in the stern almost like a Spanish hen: these birds have often won from the excellence of their pencilling, but we cannot consider them good Brahmas. The shoulders should not be too sharp, but very neat; and the wings tightly held to the body, and well tucked into and nearly buried in the cushion above and the fluff of the thighs below. A "slab-sided" bird is not to be tolerated. Breast as broad, deep, and full as possible, with the crop low down, and the breast bone well down between the thighs. The fluff ought to be very abundant and stand well out, covering the hock precisely as in the cock. A Brahma hen *must* be short on the leg: legginess may occasionally be tolerated in an otherwise good cockerel; but a leggy hen is of little value either for show or for the breeding yard. In both sexes the shanks should stand as wide apart as possible, any approach to knock-knees being instantly disqualified; and the feet should be rather large, with straight well-spread toes.

In concluding this description of the general points of all Brahmas, it only remains to add that *size* is a very important matter. Mr. Tegetmeier was the first to point out that this fowl could be bred larger than any other; and so valuable a characteristic should never be overlooked. It may be said that the most judicious feeding is necessary to attain such a size as is occasionally seen, and this is true; but it will be found that no feeding will bring up other fowls to the same standard, and therefore, while medium sized birds are more often seen, and are to be preferred if superior in symmetry



Drawn by E C Lavars. J Lavars, Litho Bristol

LIGHT BRAHMA COCK,

"SAMPSON"

BRED & EXHIBITED BY J. PARES, ESQ.

and color, size ought always to be greatly valued. We should not call any cock first-rate, which when full grown and in show condition did not weigh 12 lbs., and hens 8 or 9 lbs., while pullets ought to weigh 1 lb. per month up to 7 months, and if well fed are often more. If a cockerel does not weigh 8 lbs. at six months old he will rarely make a fine bird.

We have now to describe the distinctive markings of the separate varieties; and in regard to the Light, which we shall take first as that first seen in this country, we have to acknowledge the kind assistance of both Mr. Pares and Mr. Crook, well known for their success as breeders and exhibitors of this beautiful fowl, and who have most cheerfully placed their knowledge and experience at our disposal.

The head of the Light cock should be white, the hackle silvery white, with a *distinct* black stripe down the centre of each feather. The shoulder-coverts, back, breast, thighs, and underparts white on the surface, but the fluff or underpart of the plumage dull grey down to the skin. The secondaries or outside wing feathers white on outer web, and black on inner web, causing the wing to appear pure white when folded: the primaries or flights black. The saddle feathers may be either white, or (and this is much to be preferred) white *lightly* striped with black. Tail coverts glossy green black, those next the saddle being silvered on the edges. Tail rich glossy green black: if the two top feathers be edged with silver it should be preferred as a characteristic point already referred to: but this is now so rare that it cannot be insisted on. The shape of the tail is already described; in default of that conformation, what would be sickles in another breed should

diverge laterally like the tail of the black-cock; but in either case it should be nearly upright, and the tail of the Cochin is not to be sought after. Shanks *bright* yellow, the feathering white slightly mottled with black. Perfectly white shank feathering is if possible to be avoided.

Our illustration, by Mr. Pares' kindness, is drawn from a photograph of one of the most extraordinary birds ever shown,* and in all but one point is a faithful likeness: "Sampson" was in our opinion certainly much too light in the hackle, and we have therefore darkened the stripes, which in him were barely perceptible, to what should be considered a correct standard. The saddle we have not altered, as a white saddle has already been explained to be quite admissible. In style and symmetry the bird was a model; and his

* The career of this bird is worth remark. Bred in the spring of 1863, he commenced his career in 1864 with a commendation at Brighton (all the prizes going to dark birds in a mixed class on that occasion). He took first prize at Manchester the same year, and in 1865 won the first prize at Woodbridge, Winchester, and Birmingham; besides second at Brentwood, and high commendations at two other shows—in all three cases against dark Brahmas. In 1866 he won the first prize at the Poultry Club's Show at Rochdale, and throughout the year took first at Woodbridge, Salisbury, Reading, Cirencester, and Shoreham (against eighteen entries), winding up by taking first for the *second* time at Birmingham, when he won the most valuable silver cup given at that show. He was entered the same month for Manchester, where he would doubtless have taken his old place, as he had just beaten the actual winner at Birmingham; but on the way to the show a dog gnawed a hole in the basket and worried him to death, at the age of 3½ years. It must be remembered that in his time breeders of Light Brahmas were few, and separate classes for them at shows also far between, so that the bird had not the same chances of winning he would have had now. He was never once beaten by a bird of his own color; and though in our opinion, as we have said, too light in the hackle, was in all else an almost perfect model of what a Brahma should be.

noble carriage will not soon be forgotten by those who knew him before the fatal accident which terminated his existence.

The hen should have a pure white head, the bright red of comb, deaf ears, and wattles contrasting very distinctly: hence good condition is specially important in showing this breed. The neck clear white, distinctly and *darkly* striped down each feather, the black stripes ending *clear and round* at base of neck, so as to form a kind of dark ring. Breast, back, saddle, and in fact the whole body a clear white surface, with an under ground-color of grey. In the hen the primary or flight feathers alone are usually black. Tail coverts white; the tail itself black, except the two top feathers, which should if possible show the characteristic white edges alluded to in Chapter I., but this point cannot be insisted on. Legs bright yellow; the feathering white, very slightly mottled with black.

Our illustration is a faithful representation of the best hen we ever saw: she was also one of the largest, weighing very nearly 12 lbs. It is within our own knowledge that Mr. Crook refused £20 for this bird; and one of equal merit would realize that sum at almost any time. Her beautiful cushion and ample fluff were things to be remembered: yet there was not a trace of the Cochin formation so often seen in so-called Light Brahmas.

In both sexes of this variety, any decided tendency to yellow is a great defect. It exists naturally in some strains, and is different from the sun-burn which in long sultry seasons will sometimes occur even in good white birds. Pullets are also liable to occur with splashed or spotted

plumage, instead of clear white: such are very inferior, and if the black is of any considerable amount it should be a disqualification.

The head and neck of a Dark Brahma cock are very similar to the Light, the head being white and the hackle striped, but somewhat more so than in the light breed. The back is nearly white, a little black appearing here and there, while between the shoulders the black ought to predominate, but is nearly hidden by the hackle flowing over it. The saddle feathers are like the hackle, silvery white, striped with black. Many breeders prefer only a *little* stripe in the hackle and saddle feathers, and such are the most showy birds for exhibition, while they will often breed good pullets if other points are correct: but on the whole we greatly prefer a good distinct dark stripe in every feather. As the feathers approach the tail the stripes get broader, till they merge into the tail coverts, which are rich glossy green-black with a margin or lacing of white. The effect of this is very beautiful, while a "mossy" appearance of the coverts is not only unpleasant to the eye, but is inferior for breeding pullets. The tail itself is pure rich black with a green gloss, any white being a great blemish. This fault is hereditary in some otherwise good strains, and is we believe caused by a remote cross with the Dorking; for we never had it in our own yard, and every pen in which we have observed it has been from yards which we have known either to have had Dorking taint themselves, or to have obtained stock from other yards which had. This remark will not apply to the white margin or edge which we have several times noted as occasionally

still occurring in the two upper feathers of the cock's tail. We have never seen this except in the two cockerels referred to in our first chapter, and another we bred this season; but doubtless other breeders meet with it occasionally, and we should consider it rather a beauty than a defect if it could be perpetuated, provided the white lacing be narrow and even, and the rest of the feather pure black.

Sometimes, instead of a green lustre to the black of the cock's wings and tail, the feathers show *purple* reflections. As a rule such birds breed beautiful dark pullets, and the purple shade is not to be considered a fault.

The wing coverts are black, forming a distinct black bar across the middle of the wing, while the ends of the secondaries, or the feathers which appear when the wing is closed, have a large black spot on the end, making the top edge of the wing also appear black. The remainder of the secondaries are white on the lower half and black on the upper, but the black of course is not seen. The flights are all black except a narrow fringe of white on the lower edge. There is generally a little brown or bronze towards the top of the "bar," and at the end of the secondaries. As hereafter explained, this is almost essential to breeding dark pullets, and if not too plentiful is not to be considered a defect, but if very conspicuous is almost a disqualification. There is also often a portion of brown on the shoulders and back: in such positions the color should be condemned, being both unsightly and objectionable for breeding.

The breast may be either black, or black very slightly and evenly mottled with white. The thighs and fluff either

black, or black very lightly tipped or laced with white. The shank feathering either black, or mottled black and white.

Our illustration is drawn from a bird which was bred by Mr. Boyle, and previously to his passing into the possession of Mr. Jopp won numerous cups and prizes. His square and massive build were remarkable, and he had a good up-standing spreading tail, though he did not possess the peculiar grouse-feathers. He was, as will be seen, of the short-necked class, and may be considered an almost perfect type of the more modern Brahma.

The color of the hen has given rise to more discussion and dispute than any other point connected with Brahmas, and there are in fact several distinct schools, each having its devoted adherents. Mr. Boyle describes it in *The Practical Poultry Keeper* as "a dingy white ground, very much and closely pencilled with dark steel grey." The effect of this when perfect is very beautiful, giving the appearance of a frosted or silver grey; but there should be no appearance of actual white in the plumage, except perhaps where the pencilling is least thick on the breast. Such pullets are in perfection at about seven months old; but when the sun begins to get strong the next season they nearly always acquire a very unpleasant dingy or brown color, which we much dislike. The hens also retain the dingy color, except for a week or two after moulting; but we have seen a few birds which retained their clear color to the last, proving that were more care taken in breeding the objectionable tint might be entirely got rid of.

A more serious fault of the silver grey strains, in our

opinion, is the tendency to breed pullets with white heads. Such pullets are often white almost half way down the neck, and the remainder is very frequently cloudy or uncertain in color, instead of the rich broad black stripe which looks so well. These light-headed birds generally breed worse and worse, but not unfrequently take prizes through the ignorance of second-rate judges.

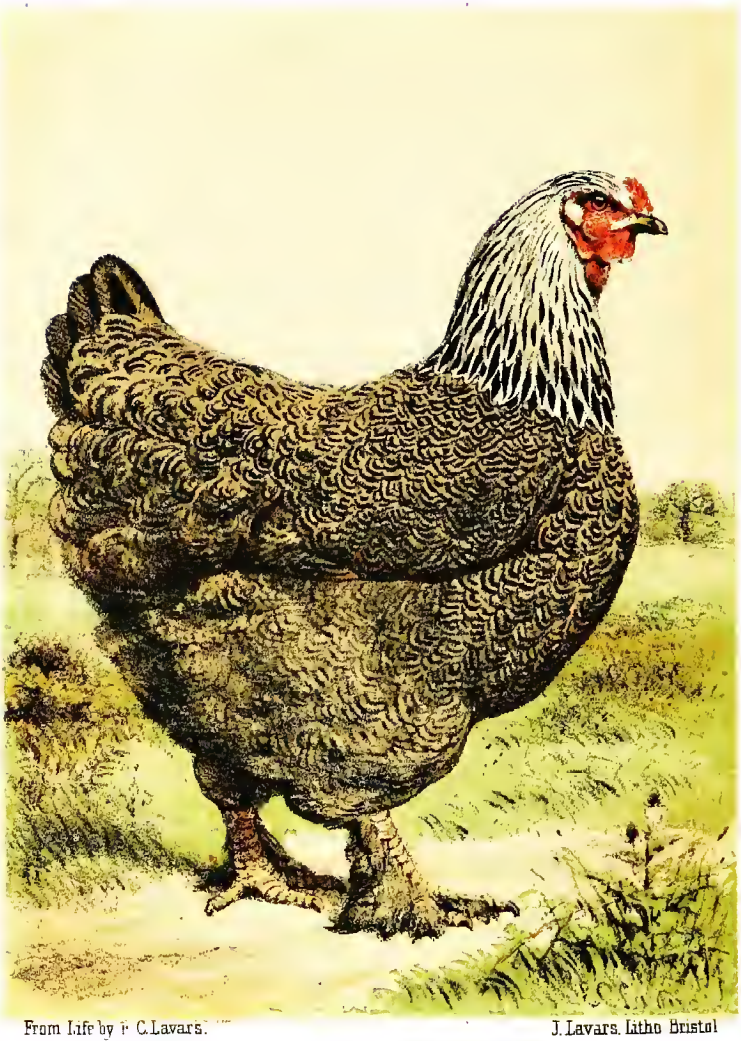
Mr. Lacy, on the other hand, who was formerly a very successful exhibitor, prefers a decided brown color for the hens. He describes the birds with which he commenced breeding* as "a beautiful pencilled brown, the ground color being the *dark*, with lighter markings of a quarter-moon shape on each feather: breast a light salmon-colored ground, with *dark* pencillings of the same quarter-moon shape, forming the most beautiful contrast of the two colors imaginable. The fluff had also the brown tinge." The reasons he gives for preferring this tint are, that fifteen years ago, in America, the finest birds he could procure were so marked; and that it breeds much truer to color, not changing with age like the grey variety. He also found that the silver-grey birds were very likely to breed pullets light on the breast; from whence he concludes that they were originated by crossing what he considers the original brown strain with lighter birds. It is certainly true that light-breasted pullets often occur in silver-grey strains; but it is not therefore needful to suppose a cross, as red or brown birds always breed truer than any other color on account of the resemblance to the wild original

* Practical Poultry Keeper, page 112.

of all our breeds: moreover, with proper care in choosing breeding stock, dark-breasted silver-grey pullets can be bred with ease. Hence, after all, the color is almost entirely a matter of preference.

There is a third color, which used to be shown by Mr. Teebay, but was for a time almost lost, through the endeavours of breeders to produce cocks *entirely* free from bronze in the wings. We prefer it to any other, and have always striven to produce and preserve it in our own yard. It differs greatly from both the silver grey and the dead brown color, being darker than either; and it has the great merit of never getting dingy upon a grass run, whatever the age of the bird, except in case of great exposure to the sun previous to moulting, when for a few months no fowls ever look very fresh. We are convinced this beautiful color only needs to be better known to be preferred to any other for Dark Brahmas; but it requires great judgment in the selection of breeding stock to produce it, or instead of good pencilling the result is apt to be dark blotches, which look very bad. In this color, the ground itself is a dark steel grey, and the pencillings or markings a rich black, so intense as to show green reflections like the tails of the cocks. This is the color of the pullets; and the hens either preserve it, or more commonly show a very slight cast of rich chesnut in the ground color, not the least dingy, while the pencillings moult black to the last. It is the intense depth in color of the pencilling which gives the rich appearance of the whole, distinguishing it alike from both those already described.

There are also differences in the shape and character of



From Life by F. C. Lavars. J. Lavars, Litho Bristol

DARK BRAHMA HEN

"JUNO"

THE PROPERTY OF MR L WRIGHT.

the pencillings. Some breeders aim at rather large sharp markings, somewhat resembling those of the Hamburgh; while others prefer the pencillings as minute as possible, even so small as to be almost indistinguishable. This last does not look well, giving a heavy and dull appearance to the plumage; but we like a rather "small pattern" much the best, as it appears not only neater, but more aristocratic and high bred.

Between these all shades of color and marking may occur, and often patches of the different schools will be found in the same bird, arising from sudden crosses between different strains. This we especially dislike: we would never condemn a pullet because bred to another color than what we prefer; but we do like any color or marking, whatever it is, to be pure and genuine, and a bird distinguished by much broken color or unevenness of marking ought never to win in a good class.

The very shape of the pencillings also varies, being in some strains almost straight across the feather, whilst in others they follow the outline and partake of the character of lacings, one within the other, as on the breast. In this point too we think a somewhat medium character the best looking, the pencillings being moderately curved, but not to too great a degree. On the breast they are fully curved or laced in all strains. But whatever shape, color, or character the pencilling assumes, *precision* is of great importance, obscure or irregular markings being very inferior in effect. By the kindness of the publishers of *The Practical Poultry-Keeper* we are enabled to reproduce drawings of actual feathers taken from

some very perfect cup birds, which give a good idea of average Brahma pencilling; but considerable variation from this type is quite admissible provided the plumage be uniform, and pure according to its own standard.

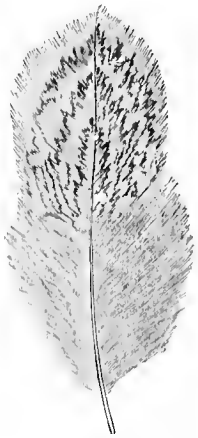


Fig. 4.
Centre of the breast.

Fig. 5.
Flat of the wing.

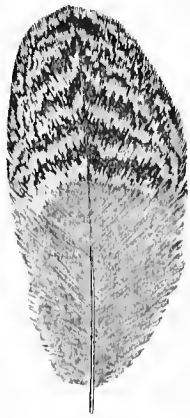


Fig. 6.
Coverts of the tail.

The head of the pullet or hen is silvery white striped with black. Lower down the neck the stripes get broader, till at the bottom they are very broad, nearly covering the feather, and ending in blunt or rounded points. The rest of the plumage should be pencilled, according to one or the other of the standards above described, the pencilling especially reaching up to the throat, and one of the chief points in a show bird being that the character and depth of marking on the breast approaches that of the rest of the body as nearly

as possible. The tail feathers alone are black, except the top ones, which are pencilled on the edge. The shank feathering of the hen *ought* to be perfectly pencilled as on the body; but this is not by any means universal, and in a fine bird we would not insist upon it, though it is desirable.

Our illustration is taken from one of the best hens we ever had. She was not remarkably large, weighing only a little over 8 lbs., but was much too good to show, being of beautiful shape, and singularly free from brown. Her color was midway between the dark tint we admire, and the silver grey; and the markings on the breast could hardly be distinguished from those on her cushion. We picked her up at a farm, and could never trace her pedigree satisfactorily, but believe her to have been from the strain of Colonel Lane.

Such are the colors of Brahmas as now exhibited, and birds which do not come under the distinct heads of Dark or Light would have no chance in the show pen whatever. But it will not have been forgotten that the first pair of birds were *grey:* and while we see and feel the great beauty of the two classes into which they so soon merged, we have always regretted that the true old grey Brahma should have no recognized standing. The color was not uniform, being usually more or less of a grey speckle over a white ground, but was almost always beautiful, as any who have seen some of Miss Watts' grey birds will admit. This lady is the only one, so far as we know, that maintains the old grey stock; but if a class should ever be given to them we are convinced, that while they will never supersede the Light or Dark, they would rival the popularity of either. Very often the pullets come most

exquisitely laced over the body, and the purity of the grey is always remarkable, while it moults out clear to the very last. No birds breed true to color with so little trouble in mating; and we think, for this reason, that as the fowl becomes popular on English farms, it may probably be the original *light grey* Brahma which is preferred; for without great care the Dark birds are always tending to this color more or less, proving their origin to have been thus derived. The time is hardly yet come, perhaps, for the recognition of such a *third* class in Brahmas, and perhaps it never may; while the objection may be easily raised that such a class would prove a receptacle for all the mongrels bred between the two others. To some extent this might be the case; but we think the difficulty more apparent than real, as such birds would still be Brahmas, and might possibly show what the breed is capable of in the way of size and shape even better than the present stocks, whose breeding is so restricted by the necessity of breeding for color. The class would in fact bear the same relation to the present Light or Dark, as the Grey Dorking does to the White; the latitude given in feather being compensated by more careful judging with regard to size and form; and as we have already expressed our opinion that the breed is of all others, *if thus bred*, best adapted to the general wants of the English farmer, we think the result could only be good, and might win for the Brahma an amount of attention from commercial breeders which it has never yet had. In regard merely to beauty, however, these light grey birds are all that can be desired; and if the liberty as to shade of color which we advocate

be thought objectionable, a very little care would soon fix a certain definite standard of marking to which prizes should be awarded. Whatever view be taken of this matter, however, it is certain that for the proportionate number of Brahmas now exhibited as compared with other breeds, in mere fairness *two classes are not enough:* and we therefore throw out the suggestion of reviving those splendid grey birds which first took American fanciers by storm, as well worthy attention in a day when "something new" is the cry everywhere in the poultry world.

Such hints as can be given on the practical breeding of Brahmas must be reserved for another chapter.

CHAPTER IV.

The Practical Breeding, Rearing, and Management of Brahmas for Exhibition.

THERE is an odd kind of fascination about breeding Brahmas that we have not felt with regard to other fowls. Not that the young birds are handsome—far from it: it is the very reverse fact that adds the charm; the chicks, especially the cockerels, being so unconscionably ugly at a certain age that they seem made for scarecrows and nothing else. As therefore their hidden beauties begin late and slowly to develope themselves, being visible to the experienced eye weeks or months ere the casual spectator can discern anything but the "lean plucked chickens" Burnham so graphically describes, there is a pleasing excitement about the business difficult to describe, but by no means hard to understand. You stand in your yard, and looking at your biggest cockerel, mentally pronounce him the very ugliest wretch you ever saw in your life—but—you don't know what he *may be!* Week by week you watch his great body settle down lower on his long legs: his wing feathers, once in such hopeless disorder, you get right after awhile with infinite pains; and when at last that tail which seemed as if it *never* would grow begins to develope, and the bird slowly acquires his adult plumage and gets into condition, your hopes rise high as you see that he is "quite

as good as last year's Birmingham cup bird, Sir," and hope that the cup may be his in due time. It may or not be—for oftentimes the whole class at an exhibition will show such a marked improvement over the previous year that a far better bird is required to win: but some such experience as this belongs to every fancier, and adds a pleasant feeling of excitement to a pursuit that is in itself, when rightly and reasonably followed, not only interesting and beneficial to the individual, but useful to the community of which he forms a part.

The attainment of both these desirable ends, however, will depend entirely upon the manner in which the business is commenced and conducted. In very rare cases we have known persons to have purchased at some show a winning pen of birds, which have not only maintained subsequently their high position, but have been the progenitors of first-class stock. This can however only happen when the pen, besides being good for exhibition, is also properly mated for breeding; and very rarely is this the case. If the first prize cock and the first prize hens at an exhibition be purchased separately, it is many chances to one against their breeding good stock; and since we have turned our attention specially to this breed we have had dozens of letters from persons who have spent large sums in this way, and afterwards given up the fancy in disgust; whereas, if they had been content patiently to *study the fowl* for themselves, or enlisted the judgment of some experienced breeder, they might not only have saved many pounds useless expense, but derived from their yards both profit and innocent gratification.

Before going into details it may be well to lay down a few general principles: and the first is, that no written instructions can supersede the *personal study* we have just advocated. Fowls, like men, have their "crinks and cranks," and often some strongly marked individuality will baffle all calculations, and when discovered needs to have special allowance made for it if success is to be attained.

Again, it is most desirable if possible in commencing a new strain, to provide at the outset several unrelated pens. By so doing the breeder may keep his strain *in his own hands* for many years, until it is thoroughly established and its qualities defined, while year by year, if he knows what he is doing, he will come nearer to his wishes; but if he is obliged to buy a cockerel every year for "fresh blood," he does *not* know what he is doing, and may spoil the result of years of patient labor, by some glaring fault lying latent in, and imported quite unsuspected by an unlucky cross. We know a strain of Dark Brahmas, for instance, which breeds very good stock when kept to itself; but the cockerels when crossed with other strains very often produce at first pullets disfigured with large white splashes, and cockerels with almost white breasts. Even the skilful breeder is constantly liable to be deceived in this way; and it is from sad experience, that whenever we breed from a strange cockerel we "hope for the best and expect the worst," as is recorded of the old woman who was compelled unwillingly to go to a fresh grocer for her pound of tea.

If fresh blood be really required to recruit an old and good strain, no pains are too great to ascertain what the birds are

likely to breed. Whenever possible he (if a cock), or they (if hens) should be chosen from *the breeder's yard;* and if young birds, the purchaser should ask to have the parents (if alive even the grand-parents) pointed out to him. If not bred by the vendor, he should ask the parentage, and when practicable see the yards thus indicated. Should the birds be older, he should for similar reasons ask to see their progeny (if any), and ascertain *how they were mated* in order to produce them. In all or any cases, both the excellences and defects that appear in either generation should be carefully noted, and the observer should endeavour to form a judgment as to what circumstances either have been owing. And finally, in thus crossing into an established yard, the most perfect birds possible should be procured, unless some particular defect be needed to counteract one of an opposite nature. This may appear a great deal of trouble; but to avoid spoiling a yard once brought to high excellence is worth it all, and it is just the careful observance of such particulars which make the distinction between the skilled and careful breeder, and the man who thinks "money can do anything," and finds that *it can't*, at least in poultry breeding.

But in commencing an altogether new yard, it is not necessary, nor even always desirable, to purchase perfect and high-priced show birds. In the first place, as already explained, even such birds will often breed a comparatively small proportion of good chickens, unless got from and matched by one breeder, which is not preferable in all cases; whilst on the other hand excellent results may often be attained with very moderate stock, provided they be so

selected that the defects of the cock shall *counteract those of the hens.* Again, size in Brahma stock, if adult, is not of the importance that might be imagined; for the breed, as we have already noted, has such a wondrous *vitality*, or power of recovery in this point, that magnificent chickens may be reared, with good feeding, from small parents—a fact which we think cannot be affirmed of any other fowl.

It will be found by experience, that with one exception, the cock has the most influence upon the fancy points, while the hen has most upon the form and size. Hence it is infinitely better to breed from small cocks and large hens than *vice versa*—indeed we always rather like small cocks for their liveliness and vigor. Hence also the reason why legginess in the cock is of less importance than in the hen, though even in her it may be counteracted. Hence also a narrow cock and very wide hen are more likely to breed well than the contrary. And it is the cock especially to which the breeder must look for defects or perfection in the comb, for the yellow leg which is so great a beauty, and, with the one exception already hinted at, for all the *finer points* of the breed.

That exception is the *pencilling* of the Dark breed. With regard to this feature, constant experience has convinced us that the influences of the two sexes are very nearly equal, but that there is *more* probability of breeding good chickens from a perfectly and darkly pencilled pullet or hen, and an untried or second-rate cock, than from a badly colored or pencilled hen, and a cock of the most perfectly pencilled "blood" that can be procured. There will probably be some

bad and some good in both cases, but the average will be as stated. If very bad in marking, therefore, a Dark hen had better be discarded altogether: if even second-rate, we should expect very few good pullets from her, but if unusually fine in shape and carriage it may be worth while to breed from her with a good male bird for the sake of the cockerels, and the stray good pullets which may come by chance.

A bad-combed hen, also, may be bred from if a cock with a very small fine comb can be procured, with the probability of success. But any actual deformity of the frame, such as round or crooked backs, must be "stamped out" at once, or the consequences may be lasting and grievous. There is a minor blemish of this kind which is very apt to prove hereditary, in the shape of small and crooked toes, instead of the firm, straight, spreading feet which alone become such a magnificent fowl.

With regard to more venial faults, in choosing a breeding pen let them be mutually and most carefully compensated. If the cock have a drooping back and saddle, let the hen be very high towards the tail: if his hackle be short or scanty, let that of the hen be unusually sweeping and full. Any white stain in the ear lobes (which is a blemish, though not a disqualification) is very apt to perpetuate itself; and if therefore any of the breeding stock possesses it, particular care should be taken that the other sex has had no sign of it for generations. If the hen is at all long in the leg, the shanks of the cock must be *particularly* short, or nearly all the progeny will be long-legged to a certainty.

To breed heavy feather, the best plan at commencing is to mate a heavily feathered and hocked cock with hens nearly bare-legged. We have had hocked birds we valued highly for breeding purposes, though we cannot express our utter scorn and contempt of those who would pluck them for show; but in general such cockerels, good in color and other points, may be obtained at a very moderate price. Some hocked birds have very little shank-feathering—such are only fit for the kitchen, any hocked bird used for breeding being also heavily feathered; when, if mated as described, there will be very few hocked chickens, the great majority being beautifully feathered, with soft, curling, but well covered hocks, just right for the show pen. The cross between a scantily feathered cock and hocked hens is not nearly so good, according to our experience, producing many hocked pullets; whereas the other cross seldom breeds more than one-fourth to one-eighth of hocked birds. The progeny, however, must be mated with peculiar care; for if birds so bred be penned together, there will often be many hocks re-produced owing to reversion, though the birds themselves be unexceptionable in appearance. Chickens bred from a hocked parent, therefore, if fully feathered, should be mated with birds from some other family bred with no taint of hock, and very *slightly* less feathered than themselves; when the progeny will commonly be feathered about the same as the better furnished, hock-bred parent. By attending to these precautions, splendid feathering may be obtained, with very little trouble from vulture hock. It cannot be denied that the proper way of breeding would have been to maintain

the proper heavy feather by selection, without aid from hocked birds at all: but the recent fashion of bare legs, and the subsequent use of hocks to remedy its effects, have so contaminated every yard, that it is better to make a *known* experiment which can be controlled, than to purchase and mate heavily feathered birds with an *unknown* amount of hocked taint, and which will be almost certain to produce many hocks, as we have found to our cost.* In a very few years, by attending to the precautions above described, all tendency to hock may be effectually eradicated, without any loss of feather.

In breeding for size, it is best to select a very short, compact, deep-bodied cockerel, which need not be large, and mate him with long-backed hens, even if their legs be rather longer than ordinary. Although length of back is a decided fault, such a cross will generally breed well; the hen appearing to supply the frame, which the cock fills out to the proper proportion. In this way we have bred pullets magnificent in shape, which weighed 9 lbs. in November, from hens only about 7½ lbs. weight, but whose length of frame supplied the necessary material to work upon. Long, rangy, large-boned cocks may also be mated with compact, short-legged hens for the same purpose; but we prefer the cross first mentioned, as generally producing better results.

* A year or two ago, we had many letters complaining that nearly all the eggs sold by a very successful exhibitor produced chicks with hocks nearly sweeping the ground. A friend of ours grimly remarked that he had got "a new breed with wings on their legs." The result in other yards recruited or commenced from this stock may be imagined.

Some of the finest chickens in point of size which we ever had were reared from the eggs of a pullet; but subsequent and larger experience has convinced us that the general opinion is correct, and that the best chickens as a rule are produced by mating either a two-year old cock or a cockerel with hens in their second season. The great point is that such chickens *fledge* more quickly, and hence get to their growing stage at an earlier period. Cocks may however be mated with pullets without any hesitation, and such a pen has the advantage that it usually produces a good proportion of pullets in each brood, while hens mated with cockerels often turn out too many male birds: but every such rule has marked exceptions. To mate cockerels and pullets, as we have already said, is not advisable; but we would not shrink from it with fine strong-boned birds, hatched before the middle of April; and the largest cockerel we ever had, weighing 8 lbs. at five months old, was bred this season (1869) from such a pen. When young birds are thus mated, however, care ought to be taken that all of them have grown up strong and without illness; and that the cockerel did not suffer from leg-weakness in *his* young days.

Many breeders have much too great a fear of "breeding in-and-in." We have already hinted at the consequences of always depending on "fresh blood;" and would ten times rather breed from near relations than from unrelated birds of bad quality. If three, or even two separate breeding pens can be provided, the fancier may go on for years without a purchase, and as long as he can breed birds good enough he had better do so. Parent and offspring, or even brother and sister,

may be bred from without injury, provided the experiment be not repeated until several years have elapsed, and *fine birds* be chosen: but if any fault exist it will of course be greatly aggravated by such a *concentration*, as it were, of the faulty blood. On the other hand, beauties may be also concentrated and fixed in the same way, as was done in the celebrated "Favorite" family of Shorthorns. No breed has such stamina as the Brahma; and we never knew evil result from breeding between relatives, unless it were foolishly repeated, which ought never to be done, or unless small and weakly birds were thus bred together.

If the breeder seeks to reproduce the peculiar "black-cock" feathers, the hen as well as the cock should be chosen with reference to this object. Some hens will be found in which the top feathers of the tail lie nearly flat over each other: such are the birds to be selected, with a cock showing any similar disposition to flatness in the top pair of quills. The difficulty is, that such birds may not unlikely be inferior in other equally important characters, and hence have to be rejected; so that recovering a character so nearly lost as this is, in the case of at least Dark Brahmas, can only be the work of time, unless the fancier has the good fortune to breed or find a bird with the feature in question, and other points also, perfect, when a little care will fix the point speedily.

In breeding light Brahmas it is very necessary to secure a sufficient amount of color in the cock. The tendency of nearly all poultry is to get lighter if indiscriminately bred, which has therefore to be guarded against by selecting

sufficiently dark cocks for breeding stock. One fault very common in light cocks is to be specially avoided, that is, the want of any distinct stripe in the hackle, which is frequently replaced by a vague cloudy appearance as if the plumage was dirty. Such a bird, independently of his inferior beauty, will rarely breed nicely striped pullets; and a bird of even lighter hackle, if the stripes are sharp and defined, is infinitely to be preferred. The saddle should be only lightly striped; for if there be much black in this part, or if even the neck hackle be too dark, spotted backs are very apt to be produced. A white-saddled bird may therefore be bred from occasionally without detriment, and sometimes with marked improvement to the color of a strain: for if this is never done, or if for several generations male birds with too dark hackle be selected, the pure white surface color is almost certain to be impaired in a majority of the progeny. These remarks apply chiefly to the formation of a new strain: when formed, and as soon as cockerels are uniformly produced with moderately striped hackle and nicely marked saddle, with pullets pure white except on the hackle and tail, such will form the best breeding stock, and should be selected as far as possible. Breeding from "cloudy" hackles will almost always cause disappointment to any one who knows what the beauty of a light Brahma really is.

We think there is a decided tendency both among breeders and judges to prefer more black or "color" in Light Brahmas than has lately been fashionable. We quite concur in this, the beauty of the breed being much increased by plenty of marking; and fanciers will do well to bear the point in mind

in forming their own analysis of the judging during the next few years, and im mating their pens.

The only cross that is likely to be met with in choosing Light Brahma stock is that with the white Cochin, which we are satisfied has contaminated more or less very many birds. As this has been denied by some experienced breeders, we think it right to state that we have the avowal in writing of a well known winner at Birmingham, that some of his best birds "were bred from a Dark Brahma cock and white Cochin hens;" and of course such a cross must not only affect his own strain, but would communicate the taint to any others which might be recruited from it. The evils of the experiment would be more apparent after two or three generations than at first, as chickens quite correct in marking are often produced by such a cross; but the effect of reversion is always seen afterwards in single combs, dark or sandy patches of color, light hackle, and deficient breast. The latter is on the whole the best test of a cross, which may be also detected in many cases by the ground color of the plumage being white instead of grey; and if the two defects be found together we should regard the evidence of a stain more or less remote as perfectly conclusive. Another very characteristic evidence of a Cochin cross is the shape of the cushion, which in Brahmas rises more and more till it rises into the nearly upright tail, whilst in crossed birds it frequently rather droops over; but as true Brahmas occasionally present this conformation, too much stress must not be laid upon it.

Light Brahmas keep much cleaner than any other fowls

which have much white in the plumage; but still they cannot of course be kept so as to show to advantage either in or very near a town. They require a clean fresh grass run to do them thorough justice; and when thus happily situated are the most strikingly handsome of any fowls we know. If in good condition they will then require no preparation whatever for exhibition, but should be shown just as taken up off their runs, simply washing their feet if dirty. If these advantages cannot be had, they may still be kept in beautiful condition in well gravelled or sanded yards, or on bare earth, provided there be an ample and *absolutely* dry shed, well supplied with finely sifted road dust or gravel, mixed with finely cut and very clean straw. The latter not only encourages them to scratch and cleanse themselves, but deepens and brings out the yellow tinge of the legs, and helps to keep the other materials dry. This last is specially important: for all fowls show a perverse disposition to revel in *damp* rather than dry earth; and the result on white plumage may be imagined. If kept in the smoke of a town it is almost impossible to show Light Brahmas with credit; and the fancier should content himself with the equally beautiful Dark breed.

It is also necessary to provide plenty of shade for Light birds, otherwise even good pure white strains will become sadly sunburnt in dry seasons. As we have remarked, there is a yellow which exists in some strains, and which nothing can bleach: but what is simply sun-burn may very often be removed by covering the yellow parts with chloride of lime, very fresh and strong, made with water into the consistency

of cream. This should be washed off in half an hour or less, *thoroughly*, with solution of hyposulphite of soda, the whole being rinsed out with blued water only. If care be not taken, the remedy will be worse than the disease, owing to the caustic power of the lime; but bleaching *can* be thus accomplished in most cases which arise merely from the sun. Washing fowls, however, removes so much of that beautiful gloss which gives half the charm to their plumage, that it is far better to provide such shade as may render any treatment unnecessary.

In breeding Dark Brahmas also, the constant tendency to breed lighter must be allowed for; and therefore, to maintain the character of any strain it is ever necessary to provide depth of color on one side or the other: in fact either the cock or the hens should if possible be a shade darker than the color desired. Mr. Teebay, who some years since carried all before him, and exhibited birds equal or superior to any seen now, always attributed his success to the fact that he "bred the darkest birds together," which soon gave a character to his strain no other possessed; and if depth of pencilling be desired the same plan must be followed still.

The selection of hens or pullets will be comparatively a simple matter. The fancier should consider what color and character of pencilling he prefers out of all those to be observed at shows, and then procure birds as near to it as possible. If they be, as above remarked, a shade darker than the fancied color, it will be all the better, provided the *character* of the pencilling be the same. It is necessary however to distinguish between pullets and hens; in the case

of silver-grey birds especially, which as hens often look so brown and dingy, that it seems almost impossible to believe they were ever of that exquisite color so admired by many in the young pullets. Such brown birds will often breed good stock; nevertheless, as the dingy color is the great drawback and blemish of the silver-grey school, if hens can be obtained free from it so much the better. In any case, the birds should be well pencilled over the breast, or it will be long and tedious work getting dark breasted pullets from such a stock.

There is almost always a little tendency in Dark Brahma pullets to show the shaft of the feather white about the shoulders and front of the breast, causing a slight appearance of streakiness, as in the silver-grey Dorking. This tendency will increase if not watched; and when allowed to develope causes an unsightly appearance, being most conspicuous, by contrast, in the darkest colored birds. Hens or pullets very much disfigured in this way should therefore be discarded; or, if employed for the sake of unusually fine shape or color, must be most carefully mated with cocks quite free from streak: otherwise the produce will be nearly all thus marked, and the tendency may get so much developed that it may be almost impossible to breed it out again, the whole body showing the white streak down the centre of every feather in a most unsightly way. A little about the breast exists in nearly all pullets, but if not too much will generally disappear when they moult out as hens.

Hens or pullets with very large coarse heads, of a "sour" expression, should in nearly every case be refused for breeding

stock. Such a strain is very often crossed with the Dorking, and to get coarse heads is to lose one of the chief beauties of the Brahma breed. A hen with this defect has in most cases large, coarse pencilling also; and only when the size, shape, and carriage were unusually fine, and pencilling also good, would we experiment with her, choosing for the purpose a particularly fine-headed male bird.

It is the choice of the cock that is the real difficulty in breeding Dark Brahmas; for those differences in color and marking which in the hens are so apparent, are in him only partially perceptible even to the most experienced eye, and to most persons not at all. There is not a breeder who has never been disappointed in his expectations from some noble-looking bird; and we do not pretend for a moment that these pages will guard everyone from failure, the different strains being so crossed and blended that unexpected tendencies are often developed, and baffle all calculation. Still there are some general principles which make success at least likely to be the reward of him who will observe them.

In breeding silver-grey pullets, the cock ought if possible to be entirely free from brown, even in the wing bar. Purple reflections in the tail are also improper, the right color being a very dark greenish black, while the bar on the wing should appear positively green. The more black there is towards the front part of the back the better, and the hackle and saddle feathers ought to be moderately but *very distinctly* striped. Supposing the bird perfect in these respects, almost all will depend on the color of the underparts; and Mr. F. Wragg, formerly manager of Mr. Boyle's yard, lays great

stress* on the breast, thighs and fluff being pure black, which seems at first sight reasonable enough. We are, however, satisfied from experience that it is to this rule, or more particularly to the principal stress being laid on the blackness of the *fluff*, that the white heads and pale breasts so frequently seen in silver-grey pullets are due. If a black-breasted cock can be procured, the fluff may be black with no ill result; but while black fluff is common, an *entirely* black breast is more rare; and if the bird have the *least* white mottling on that part, while the fluff is black, the effect will almost invariably be that the pullets bred from him are very dark behind, but too light on the breast and head. On the other hand, we have always found that a cock with the fluff slightly mottled produced better pencilled birds than the pure black, provided the *middle* of every feather were quite black, and all the white confined to the edges. Mr. Wragg's opinion evidently arose from the fact that very often the *shaft* of the feather shows white in the fluff of the cock, with more or less white or grey about the centre of the feather also; these birds will almost invariably † breed just such

* He speaks thus: "I wish to repeat, that for breeding I select a cock with all the underparts perfectly black. I especially dislike to see the fluff on the cock's thighs with white in it; many of the chickens from such a parent would be very bad in color, showing light streaky feathers on the breast."—*Practical Poultry Keeper*, *p.* 111.

† We say *almost*: for quite recently, at the best show of the year, we were asked by a well known breeder to give our opinion of his cock, which had taken the second prize. The bird was fine in shape, size, and color, all but an *unusual* amount of streaky feathers about the thighs. While therefore commending him as a show bird, we remarked that he would breed very bad pullets, and were much

"streaky" pullets as he describes. But if the shafts and whole centre of the feathering be a rich black, with only a lacing of white at the tip and edges, no such result need be apprehended, and all that has to be stipulated for a probable good result is, that the breast, whether mottled or black, be darker, or at least fully as dark, as the thighs. Then, if the hackle be well striped, and the hens have good dark breasts, two-thirds of the pullets bred will probably be fit for exhibition.

It is a singular fact, that by continually selecting cocks with wings perfectly clear from brown, a tendency is almost always developed to *increase* the brown, thus producing the very thing so carefully shunned. The brown so developed in the cockerels is however very different from that in darker strains, being of a dead or rusty tinge, and often stained or mingled with white. Even the black often loses its intensity in such birds, which are valueless for breeding and ought to be for showing (even after the brown feathers are *plucked out*), though we have known them take prizes. The tendency may be checked in a measure by always choosing dark-breasted hens, but is generally more or less a fault of the lighter grey strains. However much a Brahma cock may be mottled, there should be no appearance of "washiness" about him:

surprised to hear in reply, "Why, he breeds pullets to perfection!" Some of his progeny at the same show were pointed to us; and though neither the judges nor ourselves admired them much, they were free from streak, and we "owned up" that we did not know quite all about breeding Brahmas yet! In this case the good result may have been owing to the hens mated with the bird being particularly free from any tendency to streak; and to repeat the experiment would be very unsafe. We had however, a very streaky cock of our own which also bred pullets free from the defect, though his hens were only fair average birds.

the white should be white, and the black *black:* and no other will obtain prizes from a judge who understands the breed.

The brown color liked by some breeders is less bred now than formerly. Those who admire it should select a cock with a *few* brown feathers in the bar of the wing. The breast may be considerably mottled, and so may the thighs, if the hens be darkly pencilled on the breast, but the white mottling must be very sharp and distinct. The stripes in the hackle are generally very thin in this colored strain; and the black feathers should show green reflections as in that first described, but darker. It is also most important to ascertain that the bird be of a stock breeding the desired color; indeed we should consider this the most important point of all.

Many persons seem to consider that brown Brahmas must necessarily be crossed. We certainly have seen some such birds, whose coarse, cruel-looking heads, and other points, denoted a cross with the Dorking; but many others present all the characteristics of pure-bred Brahmas, and in a few years, simply by selection, this color may be bred from the purest grey. It is therefore more a matter of fancy than anything else. The brown strains have the merit of breeding very true to color with comparatively little trouble, and there is little difficulty in producing dark heads and breasts in the pullets. We confess we do not fancy the brown tinge; but must regard it as quite legitimate to breed it, and would never in judging place the mere color of the strain before more important considerations.

In breeding for the dense, dark pencillings which we our-

selves prefer, and which we think will again become the most popular color of any, a cock should be selected with the stripes at base of the hackle a particularly dense black, and the saddle also well striped. Particular attention should be given to the shafts of the feathers, both in hackle and saddle, and if they be very white the bird should be rejected. Indeed this precaution is necessary in breeding for any color; but most of all in this, because the dark color of the pullets will make any streakiness more conspicuous. We do not think we ever saw a cock quite free from white streak somewhere in the shafts of the saddle or hackle, but there should not be much, or we have generally found the bird bred streaky chickens. As the saddle merges into the tail coverts, the black stripes ought to become very broad, and beautifully sharp at the edges, with glossy reflections: such a bird will rarely disappoint. The fluff is best of the same brilliant black in the centre of the feathers, with a slight lacing of white; and the breast ought to be slightly mottled, the best marking of all being small round white spots about the size of pepper-corns, evenly distributed over glossy black: but a black breast, with the fluff described above, will also breed good pullets, and for breeding cocks is to be preferred. We have had a few cocks with a narrow white line at the tip of the breast feathers; and such also breed well. The shank feathering is best a little mottled, pure black being in our experience not so good.

Particular attention should also be given to the front part of the back, where it is covered by the hackle. If there be plenty of black, *dark* pullets may be confidently anticipated,

the other points mentioned above being correct; but they will often be *too* dark, merging into almost solid black on the back, with dark blotches about the breast; though this is not always the case, especially if the hens be of a lighter strain, when such dark cocks are the best. But if the hens are also dark, a cock should if possible be selected in whom these black feathers of the back are *laced with white* on the edges; and he will in most cases, fluff and saddle being right, breed beautifully pencilled birds.

The wing should have a very small amount of color in it, but not so much brown, as a metallic, glossy, copper *bronze*. This should be situated towards the top of the wing-bar, and at the ends of the secondaries, or quills of the wing, but not in so great a degree as to disfigure the bird for showing. The reflections of the tail and wing should be either green of a *bluish* cast, or of a purplish shade: we have found both breed beautiful pullets, but there is always some difference between the tails of the dark cocks and of the preceding strains. In general, *intensity* of color is to be looked for all over the bird, with at the same time some fair proportion of white to guard against want of "pattern" in the pullets. The breast should in all cases be as dark, or rather darker, than the fluff.

In selecting a cock from our own yard for breeding, we always look first to the wing, then to the saddle and the tail coverts, then to the fluff and breast. In purchasing one from another, we should lay more stress upon the saddle and coverts, and pay most attention of all to the color of the birds he was bred from. With regard to the crossing

of different colors, a cock of the dark strain may be mated with hens of either the brown or the silver grey, and will only darken the pencilling. A cock of the brown strains may also be mated with hens of the two others, with pretty tolerable results, giving however brown patches, or stray red feathers, or salmon breasts, to many of the pullets from silver grey hens. A cock from a silver grey yard will breed very few good pullets at all with hens of other colors, unless unusually dark, but will sometimes produce very beautiful and clean colored cockerels. And as the shades of difference are so fine, in claiming a cock at any show, the purchaser should *always* observe carefully the color of the hens or pullets shown by the same exhibitor, and only complete the transaction if that nearly agrees either with his own, or at least with a permissible cross for the purpose desired. If, as often happens, the same exhibitor shows different colors, the fancier must, from observation or enquiry, determine the breeding of the bird he likes as best he can.

As in the Light variety, there are many strains of Dark Brahmas in which the silvery white of the upper parts is replaced by a very disagreeable yellow. The fault is hereditary, and of late has been very common, so that even the principal cups of the year have been within our own observation won by cockerels nearly as yellow as a canary. If this tendency be not checked, one of the chief beauties of the fowl will soon be lost. The sun will sometimes cause a yellow tinge even in good white birds, but not if there be plenty of shade; whereas the hereditary kind of yellow appears when the bird is kept from any sun at all. We

believe the tint was originally introduced by a cross with the Cochin, and cannot too strongly express our dislike of it as a most unsightly blemish.

Dark Brahmas have on several occasions been extensively crossed with both Cochins and Grey Dorkings. In the case of Cochins the Partridge variety has been usually employed, and the motive we believe has been either to obtain darker breasted pullets, or to recover cushion and fluff when too much lost from ignorant breeding. The Cochin breast will be one sign of such impurity in the blood, while the expresson of the face is often very different from that of pure bred birds. But the best test is the occurrence of red feathers about the hocks or fluff of the cockerels, with yellow in the hackle; and if in addition the hens bred from the same stock have red about the shoulders, the evidence will be pretty conclusive. Red or brown about a pullet's breast is however no proof whatever of a Cochin cross, as the purest bred birds will occasionally show it.

The Dorking cross has been attempted for several objects. Some have tried the experiment with a view to gain earlier growth, the Dorking being a quickly maturing fowl, while the Brahma grows late. Others have desired to improve the quality of the meat — a legitimate object enough if the parentage were avowed; whilst some have hoped to improve the pencilling on the breast, always the difficult point with Brahma breeders. Many exhibitors doubt the existence of this cross at all; and on one occasion, at the Birmingham Show, when we pointed out a prize pen as certainly containing Dorking blood, we were met with an amount of

ridicule which we do not wish to encounter again. But facts quite justified our assertion; for in April of the following year we had a letter from a friend who had purchased a nest of eggs from the exhibitor of that very pen, stating that one of the chicks had the well-known *five claws!* Of late the taint has been less perceptible than formerly; owing partly, we believe, to the greatly increased number and skill of Brahma breeders, who have multiplied the real fowl in proportion, and rendered detection more certain by comparison. White legs are one sign of the cross. We rarely even yet visit a show without seeing somewhere a white-legged pullet, though they are less common than they were; and we believe this fault to have been introduced entirely by the Dorking cross, except where lime is used in the yard. We have seen birds all but perfect in every other point; and would not condemn such, as a good yellow-legged cock might obviate the fault in her progeny: but unless the bird was reared on a lime bottom it shows that a taint *has* existed, though nearly bred out again. A great want of cushion is another sign of Dorking blood, but is not to be trusted to alone, as bad selection in breeding will produce the same fault. On the whole the best sign is a large, "sour," cruel-looking head, which is generally the last evidence to quit a strain once contaminated, being often present even after the white leg has disappeared. A Brahma pullet may have much too long or too large a head for beauty, and yet be pure, provided the *expression* be gentle and pleasing; but we would never trust to any strain which bred cruel-looking birds. Minor signs are, too ample tail in

the cocks, or too large wings, or comb very high in the centre division and not at the sides, or especially white in the tail; but all these points should be considered and compared in doubtful cases before a decision is pronounced. Even the white leg, as we have said, we have found can be produced in a pure strain by allowing the birds to run on lime for a whole season.

Passing on now to the practical business of the breeding yard, we may say a word about selecting eggs. So many follies have been uttered concerning this matter, that we almost fear to hazard a fresh assertion. But in our own experience we have generally found, that the best shaped Brahma chickens were produced from eggs rather short and round; whilst *very* long eggs, especially if much pointed at the small end, almost always bred birds with some awkwardness in style or carriage, probably from the chick being incommoded in the shell. We had one hen which always laid such eggs; and though she and her sultan were free from the fault, all her chicks had backs drooping to the tail. It may be different with others: we give the hint for what it is worth. It is, however, certain that *smooth-shelled* eggs alone are proper for hatching in this variety, rough shells generally showing some derangement of the organs, and being often sterile. The color is of little importance: we prefer a rather dark egg, but the best hen we ever possessed for breeding laid eggs perfectly white.

Eggs should be chosen of the fair average size *usually laid* by the hen they are from, any unusually large or small being rejected. The absolute size is of little importance, some

hens laying immense eggs, and others small ones. A fat hen will always lay small eggs, which can only produce small and weakly chicks. This is the great evil of our present system of exhibition. We have had eggs sent us for inspection by indignant purchasers from celebrated exhibitors, little larger than those of a bantam, and sterile of course. We would not set such if we knew them to be from the very best pen ever seen, and to sell them is a real fraud, though it is often done in ignorance of their utter worthlessness.

The shells of Brahma eggs are generally unusually thick and dense; and hence in hot weather the chicks are very liable to perish unless the eggs are wetted, or the nest itself be on the ground in a damp place. There is no need of daily sprinkling them as some advocate; but plenty of water will do them good. Our usual plan is to take the hen off at night about a week before hatching, in summer, and empty a good *half-pint* of warm water over the nest and eggs, repeating the operation a second time the third day after, and once more the day before the eggs are to chip, replacing the mother immediately. We never remove the chicks; but as soon as all are hatched the whole family should of course be removed to a dry place.

To secure early eggs from the two-year-old hens is of great importance; and we have found that much can be done towards this by skilful management, always getting eggs from some of our hens early in January. It will be found that hens which have laid late into the season before will not lay till late in the new year; and hence such birds as are valued for next year's breeding should be allowed, as they become

broody in the autumn, either to hatch and rear a brood, or to sit on the nest for six weeks. In the latter case they should have more food than is usual with sitting hens, but not enough to cause fattening: and the usual result is to hasten the moult, which the bird then gets through without laying, and will commence in due time after. If, however, the moult finds a hen laying, she will very often continue the supply of eggs till the process is nearly completed, and early eggs cannot then be expected. This point is of the more importance, because the eggs of pullets, which can of course be had in any quantity, are not so good for early broods; though we have reared very fine early birds from the more vigorous of our young stock.

The sex of Brahma chickens can in nine cases out of ten be easily distinguished at about a fortnight old. The wings of the little cockerels are narrow and pointed, while in the pullets they are broad and rounded at the end. The cockerels also show much dark color in the wing feathers, while the pullets are nearly white in the light breed, and pencilled in the dark. Later on, pencilling generally appears in the wings of the cockerels also; but the difference is still easily seen by the pullets fledging down the breast and on the shoulders, long before the cockerels show a vestige of body-feathering anywhere. Not unfrequently pullets may be seen almost fledged, while the cockerels are nearly bare, especially when the parents on both sides are young birds.

The chicks being hatched, and supposed to be good in quality, the immediate object is to get them to the greatest possible size. With this view many people employ custard:

but we have perfectly satisfied ourselves that, whatever this mixture of milk and eggs coagulated by heat may do for Dorking chickens, it is at least thrown away upon Brahmas. We are not sure that even *better* results cannot be produced without it; at all events birds quite as large can be reared without, and we believe that the best food for this and all large-boned breeds is coarse oatmeal, mixed with milk and *ground bones*, or the "bone-dust" used by gardeners for potting plants.* The use of this latter substance has many advantages, and after several years experience we can affirm without hesitation that there is a marked difference both in the size and stamina of birds reared with it over others. It adds to the size of the birds: it postpones their maturity, or "setting" as poultry men call it, after which growth nearly ceases: it greatly prevents leg-weakness in the cockerels; and it tends to produce full and profuse feathering, and to assist in fledging. Burnt bones, or phosphate of lime, have not the same effect by any means; and raw bones crushed have the fault of inducing early laying in the pullets, whereas the bone-dust rather postpones it. The fœtid odour is of no consequence whatever with chickens, but communicates a most offensive taste to the eggs of pullets if given after laying has commenced.

For the young chickens while with the hen there is no better food than that recommended by our Scotch friend,

* For the knowledge of this ingredient we were first indebted to Mr. John Stuart, a well-known Scotch fancier, with whom we have exchanged many a long letter on poultry matters, leading to a friendship which personal acquaintance has only deepened and improved.

which is mixed as follows:—Crumbled bread, one thick slice; coarse oatmeal and *grass cut small*, of each a tea-cupful; *bone-dust* one ounce; mixed with new milk to the proper crumbly consistence. As they get older the bread may be somewhat lessened, but some should always be given, as it makes the mixture take up more milk, which is an object. We have also found chickens soon tire of oatmeal alone.

For young broods this food should always be mixed crumbly; but when they get about two months old they like it better with rather more milk. When they get tired of the oatmeal, for a change a mixture of equal parts of sharps or middlings and barley meal should be substituted, still adding the bone-dust and a little bread, and mixing with milk so that it will *break* when thrown on the ground. Enough should be given to satisfy the broods without leaving any; and they should be fed as often as any real appetite returns, which will be nearly every hour when first hatched, but will soon extend to every two hours. To get very large birds this constant care in feeding is absolutely necessary, though good sized fowls may be reared with less.

In addition to the feeding, the chicks should have every morning, the first thing, as much new milk as they will drink, and again some time in the afternoon. They are very fond of it, and it makes a considerable difference in their size, while it assists them wonderfully in early seasons. On cold days a little crushed hempseed may be added to the food with advantage. We never found our own Brahmas need ale, or that they were any the better for it, but in some cases it might perhaps be given with benefit.

The last feed at night should always consist of grits, chopped with a knife for the first few days. For a change canary seed may be given. And a little boiled liver or other cooked meat chopped fine, should be given once, and once only, every day.

Up to the middle of March the broods should have a feed every night at about ten o'clock, dry grits giving the least trouble, with as much as they will drink of warm milk. If the hen and her brood can be brought into the house so much the better. A little patience is often required to teach them to feed at night, and for several times they will often eat little or nothing, or even refuse to come out at all. In such a case we set down the light, lift the hen off the chickens bodily, and scatter the grits among them before she has time to cover them again. She will then call them to the food; and in a few days they learn that candle-light means "grub," and come out to fill their tiny crops with great satisfaction.

Almost the only ailment Brahma chickens are subject to is cramp in the feet. Mere cold is seldom the reason of this, but damp ground will almost always cause it in a portion of every brood till the weather becomes mild, though the offspring of adult birds are less subject to it. The chicks look perfectly well, till some of them are observed with a tendency to close the claws as though roosting, and this increases until the poor little wretch has to walk upon its knuckles in a manner painful to witness. The milk and bone-dust, with meat once a day, will guard against it in a measure ; but in bad weather in February or March some cases will be sure to occur, unless the breeder has a shed floored with *perfectly* dry dust or earth,

in which case he will not be troubled unless his stock is weakly. Even bad cases, however, can be cured. The treatment is, to provide a cage near enough to the fire to be comfortably warm, well furnished with fine dry ashes, and to remove the chicks to it, only restoring them to the hen when she is brought in at night. They are to be fed as usual, and five or six times a day must be taken out and their feet bathed in warm water, opening out the claws to the natural position under the water, and keeping them so for about a minute, when the chick must be put back in the cage. When it begins to recover, it may now and then be left with the hen for an hour or two on sunny days, but not in bad weather till perfectly well. Much patience may be required, and we have had chicks which needed a fortnight's treatment ere they were quite restored; but we never had one case we did not conquer at last, unless the chick had been left for many days before treatment was commenced.

If the chicks are bred in confinement the supply of green food must be unlimited; and the best is grass, cut into green chaff with a pair of scissors, and thrown on the ground by itself as well as mixed in the meal. They will eat much more of it this way than if they have to pluck it from a turf. On a grass run of course this will not be needed.

At ten weeks to three months old the cockerels *must* be separated from the pullets if fine birds are desired. When kept together, the pullets lay much sooner, and the cockerels "furnish" or finish their fledging, and both stop growing. The cockerels are best turned into a run in company with an old cock, who will generally keep order, and agree very well

with them until they are first shown; but after absence at a show each bird will have to be provided for separately, or there will be a fight.

The same period is a convenient time for picking out all evident "wasters," which can often be known at this age, but not always. Dark pullets must not be discarded for white breasts, as the pencilling often does not develope till the feathers change: but a very streaky bird may be safely condemned, as may any which show great splashes of white or brown about the back and shoulders. Dark cockerels which are nearly white on the breast, of which one or two may occur in the darkest strains at this age, should also be picked out; but well-shaped and promising chickens should not be rejected for any amount of brown in the wings, as this will often nearly or quite disappear with the adult plumage. It is worth noting, that the general carriage of the cockerels can be judged better at about ten weeks old, than at any subsequent age until the bird assumes his matured appearance.

Light Brahmas at the same period often show a great deal of black, especially on the backs of the pullets and fluff of the cockerels. Sometimes this will remain even until six months old, and still disappear; so that the fancier should be cautious how he discards promising birds on account of too much black, before they are full grown.

Like all other large fowls, Brahma cockerels are somewhat subject to leg-weakness, caused simply by the growth being more rapid than the constitution can bear. The progeny of young birds are most subject to it; but the use of bone-dust in the food, as we have recommended, with a little sulphate of

iron in the drinking water, we can state from experience is almost a preventive. Since we adopted this system of feeding we have only had one case, and that a very mild one, though we have often bred from young birds; and we believe if the plan be generally followed it will be almost needless to prescribe any treatment for this well-known infirmity; but as the bone-dust is often difficult to procure, we give the following remarks by Mr. Joseph Hinton:—

"Of leg-weakness," he writes, "I believe there are two kinds: bone weakness, from deficiency of bony matter, and muscular weakness. Muscular debility we find generally in very heavy birds, and is shown by the unsteady gait and the frequent squatting down plump on the ground. Here we want iron, strychnia, and phosphate of lime—say

Sulphate of Iron	... ...	1 grain
,, Strychnia *	...	$\frac{1}{16}$,,
Phosphate of Lime	... ...	5 ,,

to be given three times a day for about six weeks; but unless the bird is likely to prove valuable it had better be killed.

"In the cases caused by deficiency of bone, the breast-bone gives us some indication; and the bird is more disposed to be 'knock-kneed' than actually weak on the legs. This is a very great fault, and when the hocks have once thoroughly assumed the inward inclination I do not think there is much good to be done. I have often thought of tying a splint or piece of wood between the hocks to keep them at the proper

* On account of the danger from an overdose of the strychnia, these pills should be made up by a chemist, unless the breeder possesses the necessary knowledge.

width: but in breeding fancy stock I feel convinced that to kill is generally the cheapest cure in the end, as birds fussed with and petted rarely grow to equal the others, at least in my experience. Plenty of phosphate of lime would be the best remedy for this form of the affection."

There is yet another danger through which the chickens, especially the cockerels, have to pass before they are ready for the show-pen. It rarely troubles those who have an extensive grass run for their birds—happy indeed are such!—but all who breed in confined spaces know too well how surely, in due time, nearly all their best young cocks acquire the deformity known in the fancy as a "slipped" or "turned wing," caused by the flights protruding in disorder outside the other feathers. If neglected the whole wing often gets into hopeless confusion, and almost past remedy. There is a form of disordered wing which is indeed hereditary and incurable, being caused by the feathers *growing* spiral-fashion, or twisted on their own axes; but it is happily very rare. Whenever this occurs it should be ruthlessly "stamped out;" but mere displacement can be cured in every case if *taken in time.* It occurs usually about four to five months old, and in confined yards is occasioned by the bird being driven by others, or otherwise frightened, causing the wing to be so rapidly extended that in re-closing the feathers are not properly returned. Even a single such occurrence will sometimes cause the blemish; but if not, a few repeated soon confirm the fault, which greatly mars the beauty of the bird, and as it arises at an age when the quills are not hardened, becomes permanent if not cured.

The cure is perfectly easy, simple, and unfailing—at all events, while a majority of our own cockerels, being reared in very small runs, have been more or less affected, we never had but one case which care and patience did not perfectly subdue. Nothing can be done until the chicken-feathers are cast, and the new or adult quills of the wing are grown long enough to hold a ligature. This is usually at from eighteen to twenty-two weeks old; and as soon as it appears to be the case, the bird is to be taken by candle-light (for the sake of quietness) and the wing carefully replaced in the proper position. Everything depends upon *each feather* being duly returned; and this much having been ascertained, the wing

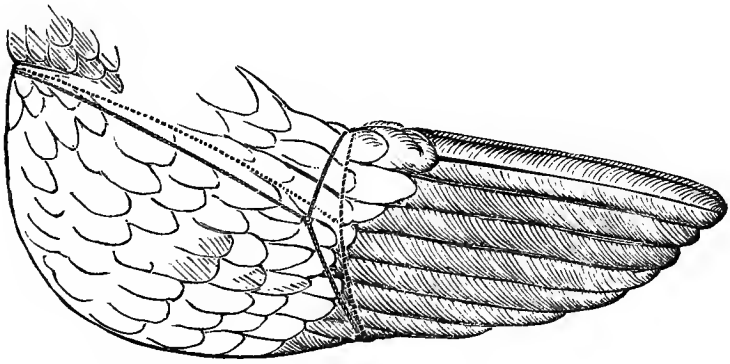


Fig. 7.

must be bound round rather tightly, as near the shoulder as possible, with soft string about the thickness of whipcord, bringing the knot to about the middle of the outside. The cord must then be passed from the knot round the shoulder

or web of the wing, and tied again to the middle of the ligature on the inside; which will effectually prevent the bird slipping off the unwelcome restraint, as he will endeavour to do. Fig. 7 will explain what is meant to the merest tyro. The beginner may occasionally find he has made either the ligature or the retaining cord too slack; in which case he will next morning find the bird has again slipped the flights out of place, and the work must be done over again the following night. If on the other hand the shoulder or retaining cord be drawn too tight, it will cut and become embedded in the web of the wing, causing the bird much pain and distress. After one or two trials the proper tension of both cords will be ascertained, and no further difficulty found. Most birds will submit to the operation quietly enough if taken from their perch, but even when restive, patience and tact will always prevail. Some wings are particularly awkward to tie, and we remember one fine cockerel in particular, whose wing we had to tie up afresh every night for a whole week, before all the feathers were retained in place to our satisfaction; but we effected it at last, and eventually sold him for a large sum, perfectly cured.

The bird must be kept with his wing or wings tied up for at least three weeks, or until the quills appear grown their full length, when the ligature may be cut. The chances are that one wing may now appear cured and the other not; and if either or both are still in fault, the operation must be patiently repeated. We have had birds that occasioned us more than two months of watchful care; but excepting one, whose treatment had been delayed rather

too long, never had a case yet we did not overcome in the end.

Pullets are subject to the same fault, but not nearly so often as the cockerels; and even adult birds will sometimes require attention to their wings during moulting time. Where the tendency is slight, it is often sufficient simply to see the wing is properly tucked up every night at roost during the critical period. We do not think we ever knew a bad case where the birds had the run of a grass field.

With the approach of warm weather it is best to discontinue giving any meat to the chickens, or the combs of the young cocks will have a tendency to grow too large, and the pullets would lay too early for large size. Indeed, it is very difficult in fine seasons to prevent early pullets from laying at about five months old, as they reach that age at a time of year when everything favors the production of eggs; but where there is room much can be done by constant watchfulness and attention, and the eventual size will greatly depend upon the success with which the tendency can be warded off. Milk and all stimulating food should therefore be discontinued, but the bone-dust should still be given, having a decided tendency to keep the birds raw or unformed. As the combs develope and become red the pullets should be carefully watched, and as soon as there seems the slightest reason to suspect the approach of laying, be removed to a strange run. This will usually check the production of eggs for a fortnight at least, and the same expedient may often be employed for a second time with success, but rarely more than this if the bird has been really on the point of laying. It is better, therefore,

when possible, to move each lot of pullets to a strange run every three weeks or so from the time they are four months old, by which even early birds may often be kept from laying till after seven months, to their great advantage.

We never like to see a young cock look "pretty" at too early an age: such a bird may win at a very early show, but by Christmas will appear a dwarf. Neither are we pleased to see three-months chickens of either sex too short on the leg: such also rarely make fine birds. It is the business of chicks to make *frame*, on which flesh and feathers will soon come after; and it is the raw, ugly-looking, long-legged birds, whose hackle is long in coming, and whose wattles show but little, which in the end make giants for the show-pen. Even at six months old the best cockerels generally appear very raw and unformed, with hackle not half grown, and a length of leg no one could believe would ever seem less; but two months more will tell a different tale, and produce magnificent birds, beside which the precocious ones of September are not fit to stand.

Cockerels should therefore be hatched early, and in our opinion are at their best when eight or nine months old; but a few months more does them little injury provided the upper plumage remain a good white, which in confinement is often not the case. Pullets, on the contrary, are often hatched too soon, and by the time they have to be shown at Birmingham have got long past their best condition, having reduced themselves by laying. When this has once commenced there is nothing like a grass run to keep them fresh; but we think they never look quite so well as while laying their first few eggs. Pullets intended for Birmingham are therefore better

hatched towards the end of April; and though cockerels of the same date are often scarcely mature enough, they usually make larger birds eventually than if hatched at either a later or earlier period.

We are convinced that Brahma chickens can be reared to the best advantage of all, in grass yards of only moderate size; say about one thousand square feet, which will rear a dozen fine cockerels and remain green. With unlimited range the birds cannot be got to feed so regularly; and though in beautiful condition, mature too soon to make large fowls. On the other hand, cockerels bred in confinement seldom take enough exercise; and hence, though easily reared to a great size, often acquire an ungainly carriage which birds with more liberty never have.

With regard to actual show condition, however, we are more and more convinced that nothing can equal the effect of a good wide grass run, and have always greatly felt our own disadvantage in this respect. Birds thus happily situated will only need to have as much soft food as they will eat for three weeks before any show, and to have their legs and feet washed the night before sending off; unless they appear wild, when they should be accustomed to being penned. This is easiest accomplished by putting them in a pen every night for a week, and keeping them confined till about an hour after they have been fed in the morning, when they should not be taken out, but allowed to come quietly of themselves. If they are too thin they may be kept up in a dry shed for a fortnight, letting them out on the grass for an hour daily to keep up the appetite and give them exercise.

In exhibiting Brahmas bred in confinement, the difficulty is to obtain gloss and hardness of plumage; but even in such circumstances much can be done by attention and care. The most scrupulous cleanliness must be observed both in house and run; and as before recommended, a shed floored with *perfectly* dry material is of the utmost importance. If any washing be needed, it should be done at least eight days before the show, in order that there may be time for a fresh secretion of oil to restore the gloss. Till the bird is thoroughly dry it should be kept in a dry room with nothing but straw or chaff on the floor, lest it should soil the washed plumage while damp: but when dry it may be returned to the shed, into which should be tipped some bushels of finely cut straw, enough to cover the earth or ashes all over several inches deep. This will keep the plumage perfectly clean and nice (at least so far as anything can), and the birds enjoy it greatly.

The parts most likely to need washing in Dark Brahmas are the wings of the cocks and cushion of the pullets. Many pullets appear brown in the cushion from no other reason than that they were reared in small runs, the earth in which they dust themselves adhering to a certain extent to the plumage of this part, which is not so close as on the rest of the bird. We hardly know whether to recommend washing or not: much depends on the skill with which it is done, and the time allowed to recover. The operation is best performed with ammonia instead of soap, as this will entirely evaporate without the need of washing out, and there is less risk of clogging the feathers. The final rinsing should be done with

water slightly blued, but not so much so as to give the effect of a dye—just as much as will still allow a white bird to appear white. It is very difficult for any but a professed "poultry-man" in constant practice to wash a fowl well; and after trying both plans we now generally, on the few occasions we exhibit, let our birds go as they are. The straw-chaff mentioned will clean them to a great extent, and improves their health at the same time.

With regard to feeding in confinement, the great thing is to give the birds as much as they will eat with healthy appetite, and no more. Were the condition in which Game fowls are shown more favored by exhibitors and judges, breeders in towns would be more on a level with their country brethren; but to obtain hardness of feather with the *weight* necessary to win, is not an easy matter in a small yard. Peas, to which the Game cock owes so much, would do the same for the Brahma, but will not make size and weight. On the whole we consider the best feeding for grown chickens to be a good feed of any meal morning and noon, with grain at night, substituting for the grain, linseed every third day during the last fortnight. If the birds are not *over*-fed this will do no harm, and gives much gloss to the feather. The cockerels may with great advantage for a month previous, have daily some fresh or *raw* bones, crushed as recommended by Mr. Crook, to the size of peas; but for the pullets it would be too stimulating to give this, for fear of hypertrophy of the egg organs. The effect of it is very great in giving condition to the young cocks, but they are apt to become very combative in a small yard.

The use of sulphate of iron in the water will bring out the bright red color of the combs and wattles; and before sending off, these parts of town-bred birds should be well washed—for which purpose a common tooth-brush is very handy—and then carefully oiled with a camel-hair pencil, taking care, however, not to grease the adjacent feathers. Any *stray* broken or foul feather may be plucked out without wrong, and finally a careful smoothing over with a silk handkerchief will do about all that can be honestly done for the birds. The rest must be left for the judges.

If the journey to the show be a long one, there is no better expedient for refreshing the birds on the way than that recommended by Mr. Wragg* of tying half a loaf inside the hamper on one side, and a fresh cabbage on the other. They should in such circumstances be sent off by the night *mail trains*, which will reach almost any place by good time in the morning, and the birds miss their food but little. Should they appear overdone, if the owner is with them, a table-spoonful of port wine will often make a wonderful difference.

We only make one final remark. Brahmas will not bear *continual* showing. Could they be shown with success in the state Game fowls are—and we take this last opportunity of expressing, however hopelessly, our emphatic opinion that this is the condition in which *all* fowls ought to be shown—no breed would surpass them in endurance of fatigue; but to carry the weight of flesh and fat success demands, with the excitement and confinement of exhibition added, breaks them

* Practical Poultry Keeper, page 93.

down sooner than Cochins, on account of their naturally active disposition. We have repeatedly known celebrated cup cockerels purchased at as much as £20, which proved perfectly sterile, having been ruined and broken down in constitution by over-exhibition ; and there is no judge but has repeatedly to express his regret at seeing some noble cock, winner perhaps only the week before, either actually paralysed in the legs or too weak to stand in his pen. To show birds thus is to display the *vices* of the poultry fancy—to carry to sinful excess in rivalry one of the most healthful, innocent, and useful pursuits open as recreation for the wearied body and mind of man; and whenever we come across such a case, we feel it hard to conceal our contempt for the gambling spirit which can gorge and then wear out a poor bird, just for the sake of one more prize.

CHAPTER V.

On the Judging of Brahmas.

THERE is no question whatever that the publication of the well-known *Standard of Excellence in Exhibition Poultry*, drawn up as it was by the best breeders and judges of the day, did much to promote a greater uniformity of judging both in Brahmas and other fowls; and whatever fault be found with it, we think, on the whole, it will ever remain the basis at least of any future system of judging. It in fact opened up an entirely new question, as to whether the judging of poultry *could* be conducted upon any "system" at all—a matter not altogether settled even now. It was contended by many that correct judging could only be performed by "the eye" of an experienced individual, whose general opinion of a bird would be of greater value than any conclusion arrived at by other means. On the other hand, the promoters and compilers of *The Standard* proposed to substitute for this—which may be called the empirical method—a regular system of deciding by "points," each of which was to have a certain numerical value, and which were to be added up to determine the relative value of a bird, much in the same way as the well-known "good marks" in schools. To say that no judge could go about "book in hand" and actually "add up the points" of the best birds, is not to offer any valid objection to such a system, since long experience and habit would give to him a ready and

instinctive appreciation of the value of the points, which would amount to nearly the same thing; and the experiment was accordingly regarded with great interest by all intelligent poultry breeders.

With regard to the actual result opinions differ: but for ourselves, as we have already said, we think there has been of late years an appreciable and gratifying improvement in the uniformity of judging, clearly traceable to *The Standard*; whilst on the other hand, we have repeatedly had occasion to observe how in certain cases the system completely breaks down. The question then naturally arises, whether in such cases of failure* the fault is inherent in the system itself, or arises from insufficient or erroneous development of it. This question is a very interesting one, but we cannot discuss it here, being foreign to the special subject of these pages. We will only say, that a new system could not be expected to reach perfection at the first attempt; and that so far as Brahmas are concerned, while we feel convinced, after many attempts to frame a perfect schedule of points for them, that no theory can *entirely* dispense with what we have called the instinct or general impression of the judge, we do think a very nearly perfect system may be devised, and such as will in case of doubt solve almost any practical difficulty. In the few remarks which follow, therefore, we do not presume to teach authorities already eminent how to judge a Brahma, but

* We are supposing of course cases where a pen is evidently *correctly* judged, whilst the award is as plainly inconsistent with the numerical value of the points as laid down in *The Standard*. Many such cases have come under our own notice.

simply to assist those who may be conscious they do not thoroughly understand this particular breed, and who may have found by experience that to literally follow *The Standard* in all cases occasionally leads to manifest errors. We can illustrate our meaning best by first giving the value of points in Brahmas as laid down in the work referred to, where they stand thus:

POINTS OF BRAHMAS.*

Size	3
Color	4
Head and Comb	1
Wings. Primaries well tucked under secondaries	1
Legs, and feathering of ditto	1
Fluff	1
Symmetry	2
Condition	2
Total	15

DISQUALIFICATIONS.—Birds not matching in the pen; combs not uniform in the pen, or falling over to one side; crooked backs; legs not feathered to the toes, or of any color except yellow or dusky yellow.

The system implied here is easily understood. A pullet perfect in color will count 4 on that ground; but if not perfect will count only 3, 2, or 1, according to the judge's opinion of her marking; or if he thinks her very bad will lose 4 points. If wanting in leg-feather, however, she will only lose 1. Thus all her points are added up, and by the

* We do not think it needful to confuse our present subject by repeating the descriptive points, having gone fully into this branch of the question in Chap. III.

result she is to be compared with other birds. If, however, a bird has a very bad falling comb, it is to be disqualified; and the same of a crooked back and some other faults.

Now applying this to the decisions of the best judges, it will be found, that while often pretty consistent, many evidently *correct* decisions do not harmonize with it. For instance, we well remember Mr. Hewitt once awarding a cup to a cockerel with a very large shapeless comb hanging considerably over, and legs almost white; on both of which accounts, according to the above, the bird should have been disqualified. We are not sure we should ourselves have awarded him the place of honor; but would without hesitation have given him the first prize (a position equally inconsistent with *The Standard*) the reason being, that the bird was so rarely perfect in every other point, no judge could possibly have passed him over. Again, let us suppose a cockerel to lose one point by not being very large, another by a little want of condition, and another by some degree of fault in the comb: if perfect in other matters his numerical value would be 12. The bird in the next pen might carry every point with the sole exception of symmetry, in which he was altogether wanting, being clumsy in shape and most ungainly in carriage: this fault would lose him 2 points, and his value would be 13, beating the other by one point. But we have not the least hesitation in saying that nearly any judge—certainly any *good* judge—would exactly reverse such a conclusion. Many other similar cases might be given, and are constantly occurring.

It will be seen, then, that the primary fault of *The Standard*

system is that it is not *elastic* enough: and after many trials to amend it, we feel persuaded that 15 points are *not sufficient* to form any reliable "standard" at all of some breeds; whilst there are several elements unmentioned, which ought to be included in the calculation. Respecting some points, also, opinion has perceptibly changed since the original tables were published. We have therefore ventured to suggest an extended scale, not as our own opinion merely, but as embodying what careful comparison has taught us is about the value now *practically* given to various points, as evidenced by the best actual *decisions* of Messrs. Hewitt and Teebay during the last two years. The difficulty of tabulating such actual practice and reducing it to a definite system, none but those who have attempted it can estimate; and we offer the subjoined scale with some diffidence, as another attempt to enable judges of less experience to arbitrate in harmony with the practice of the best recognized authorities.

It will be seen that in our table of points we have separated the sexes. We have done so because all our observations have led us to the conclusion that to apply the same scale to both is to necessitate a false standard for one or the other.

In our opinion, then, the general table of values should stand as follows. The italics represent our own personal views only: all the rest is deduced from actual analysis of the value now practically given to the points, any decisions apparently erroneous having been excluded from the calculation.

THE COCK.

Points of Merit.	
Size	4
Color	4
Smallness, shape, and expression of Head	1
Comb	2
Fullness of Hackle	1
Wings, proper size and position of	1
Legs and feathering	2
Fluff	1
Breadth of Saddle	1
Rise of ditto	1
Tail	2
Symmetry	2
Condition and handsome appearance	3
	25

Special Defects. *To count against the bird in proportion to their degree.*	
Stain of white in deaf ear	1
White legs*	3
Primaries of wing not tucked in	3
Vulture hocks †	3 to 4
White in the tail †	3

Disqualifications.

Round or crooked back, crooked beak, or any bodily deformity; knock-knees, or any fraudulent dressing or trimming.

With reference to the table of defects, it should be observed that only those can manifestly be inserted which are not provided for in the points of merit. Thus, smallness would be a great fault; but the bird would according to the points of merit lose four by want of size, and no other provision is therefore necessary. So of defects in comb and feathering. A tail too long or sweeping on the one hand, or too much like a Cochin on the other, would also lose a bird either one or two points. Hence the table of defects is only needed for special faults which in practice are found not sufficiently accounted for in the general scale.

* A white or pinky-legged bird to be disqualified, unless very perfect in other respects.

† See remarks further on.

In regard to the special points of difference, it will be seen that, amongst other things, we have given much greater weight than *The Standard* to disorder of the wings. Like the other points wherein we differ, this results from comparison of many decisions by the authorities named; who—we think quite rightly—have on all late occasions laid great stress on the fault in question, so much so that in good classes a bird is now almost disqualified unless he carries his wings clean. Comb and leg-feathering are also now given, in practice, at least the values we have attached to them.

In suggesting that three or four points against a bird should be allotted to white in the tail, we differ somewhat from one or two judges for whose opinion we have the highest respect; though we believe every judge of repute attaches more or less weight to the fault in question. In urging that so much stress should be laid upon this fault, we certainly are influenced partly by the fact that Brahmas are in a great degree birds of feather; and that if so, such a glaring blemish ought to be regarded as in the case of a Silver-grey Dorking. But a far stronger reason is that hardly any fault has so strongly hereditary a character, which makes it most desirable to stamp it out. We also believe it is generally a sign of former Dorking taint; for we have never yet found it except in strains which had large coarse heads, a point we have already mentioned as indicating Dorking blood. All these reasons, therefore, demand that more value should be attached to purity of color in the tail than has hitherto been the case, if it be desired to secure even purity of breed.

With regard to color, we would simply express our opinion that a bird of the objectionable straw color we have already referred to, should lose the full number of four points; the fault being lately so much increased as to need this decided check.

We now pass to

THE HEN.

Points of Merit.	
Size	3
Beauty and regularity of color and marking	4
Smallness and beauty of head	2
Comb	1
Shortness and breadth of back	1
Cushion	2
Fluff	1
Legs and feathering	2
Shape	2
Condition, carriage, and general appearance	2
	—
	20

Special Defects.	
White legs	2
Very long tail	2
Primaries not tucked in	3
Very streaky feathers, though otherwise good color (in Dark)	2
Shank feathering not pencilled as body (in Dark)	1
Spotted back (in Light)	2
Vulture hocks †	2 to 3

Disqualifications.

Round or crooked backs; crooked bills; knock-knees, or any bodily deformity; large red or white splashes in the Dark breed; pinky legs, or any fraudulent dyeing, dressing, or trimming.

In the hen, it will be observed, we have attached more value to the head and less to the comb than in the cock. This is in conformity both with all recent decisions, and with strict propriety; as are the other variations from or additions to the numerical values given for the male bird.

The above scales we think, after much comparison and testing, will be found to harmonize with the practice of the

† See remarks further on.

two eminent judges we have named, in almost every case correctly judged. We feel convinced that to form any system at all, it is needful to value marked *defects* as well as points of merit; and that it is from the want of this that *The Standard* has not been found comprehensive enough when tested by actual results. It must in fairness be admitted, however, that the Brahma—especially the Dark Brahma—is one of the most difficult breeds of all to deal with; and that no system can possibly dispense with what we may call the *instinct* of a good judge. Mr. Hewitt will often, as we have witnessed, pick out the first-prize bird by one glance of his eye down the class, more correctly than a less experienced arbitrator would do after an hour's examination with the most perfect "scale of points" in his hand. No such system can in fact *make* a judge, where this natural "eye" for a fowl is altogether wanting; but it may still be of great use, especially in judging breeds with whose special points the arbitrator is less acquainted; and may also serve, in the rare cases where a good judge has—from want of time, nervousness, or sheer fatigue of mind—made a wrong decision, to prevent exhibitors being misled by such an error into following a really faulty standard. It is with such objects only that these remarks are offered for the consideration of those who have occasion or desire to study the correct judging of the Brahma fowl.

It is absolutely necessary to notice in this place the vexed question regarding vulture-hocks. *The Standard of Excellence* pronounced these to be "objectionable, but *not* a disqualification." Since then the hock has been absolutely disqualified,

with two evident consequences. In the first place, breeders acquired such an absurd *dread* of disqualification for hock that they feared to breed even well-feathered birds: some judges would not look at even a *moderately* feathered shank, and nearly "bare poles" became the ordinary fashion. The ugliness of this, however, speedily caused most exhibitors to give it up in sheer disgust; with the second consequence that many who would not *wait* to breed the lost feather back fairly, bred hocked birds, plucked the hock, and showed them thus to win prizes. We will not, and we wish not to mention names—these pages are written to assist, and not to wound others—but truth compels us to state from personal observation, that this was done and prizes were so won in *dozens of cases;* and that we have several times heard the trickery confessed and justified by the offender's own lips. On every such occasion the ground of justification has been, that the hocked specimens have been amongst the "best birds," and it has often been added, "we can't afford to give them up, sir."

Now as the only object of disqualifying any particular feature is to banish it from the fancy, and since the disqualification of vulture-hock has altogether failed in this effect: since hocked birds *are* shown—fraudulently—and being then purchased disgust many purchasers who do not like the appendage; since many experienced breeders affirm that it is often the best specimens in other respects which are so furnished, and refuse to give them up; and since it is found in practice that the time allotted for judging is not enough to detect fraud in very many cases;—from all these considera-

tions it appears that absolute disqualification has not only missed its sole possible end, but has actually produced serious evils. We cannot resist the conclusion that under these circumstances the dictum of *The Standard* should be again regarded as the rule of judging, and that vulture-hocks should be considered "objectionable, but *not* a disqualification;" that is, that the hock should weigh sensibly against a bird; but that a specimen of marked superiority in every other point should not be disqualified, but be judged as a *whole*. We object to the hock ourselves as most unsightly, but this conclusion is forced upon us; we believe it is becoming the conviction of many judges themselves; and we appeal to them, as having studied this particular fowl with ever-increasing interest for several years, to hasten by their decisions and all other means in their power the general adoption of such a rule.

In our opinion vulture-hocks should have the value of 3 or 4 points against a cock, and 2 or 3 points against a hen. Less than this would not attain the desirable end of discouraging the hock as much as possible; while more would still hold out temptation to fraudulent proceedings, and amount in practice to the disqualification which has wrought such evil effects.

We have frequently seen Brahma cockerels much plucked about the tails. This is usually done to produce the effect of the Cochin tail, which so many seem ignorantly to aim after; and the effect is always bad—far worse than nature—to any-one who understands the fowl. We need not say that this or any other fraudulent proceeding should subject a pen to instant and ignominious disqualification.

Finally, we would repeat that there has been of late an increasing tendency to show birds *too fat.* All large breeds are subject to this evil; and years ago, when it was even more prevalent than now, Mr. Hewitt did good service by passing over in a marked manner several over-fattened pens, and thereby discouraging the practice of feeding show fowls to the highest possible point, to their utter ruin. Again, however, the same vicious system appears to be gradually creeping in; and as the practice is really dishonest, it should be checked as far as possible by never awarding prizes to pens which evidently carry more fat than is consistent with real health and condition.

APPENDIX.

ORIGIN OF BRAHMAS.

IN our first chapter we examined as fully as was then possible into the various evidence regarding the first appearance of the Brahma fowl; and from exhaustive analysis were compelled to believe that the only account which was consistent both with the facts and with itself, was that by Mr. Virgil Cornish, of Connecticut, which was seen to be corroborated in every possible way. We are glad at the very last moment to be able to add testimony which must be considered decisive.

While the latter pages of this work were preparing for the press we received a letter from Col. Mason C. Weld, widely known in the United States as one of the editors of the *American Agriculturist*, and with whom we had had previous friendly communication, covering a short note to him (dated Nov. 3rd, 1869) from Mr. Cornish, in reply to one of his own. The occasion of this note was the perusal of a proof sheet of our first chapter, which Col. Weld had read with interest, not only as a Brahma fancier, but as an old friend of Mr. Cornish. On learning the latter fact we begged of the colonel to procure some fuller particulars; but he had anticipated the

request, and already "fired off at his old friend" a whole string of questions on the subject. Late in the same month, therefore, we received the following letters :—

NEW YORK, November 11th, 1869.

MY DEAR SIR,—I transmit to you another letter from Mr. Cornish, which will I doubt not interest you much.

There is clearly no room for suspicion of any statement he makes; besides, no one who knows the man would question his accuracy.

It is clear that we owe it to him alone that we now have this noblest and purest of the Asiatic breeds.

Hatch would have allowed them to pass for Grey Chittagongs, and they would of course have been lost. Mr. C.'s presence in Boston prevented this; and by his efforts and testimony, the Boston special committee were led to a correct decision, which has year by year ever since been confirmed by intelligent breeders and poultry societies.

Though I may have succeeded only in confirming your decisions as to where the Brahmas came from, I trust I have elicited from my old friend some valuable bits of history.

With highest esteem, truly yours,

Mr. Lewis Wright. MASON C. WELD.

Enclosed was Mr. Cornish's letter, which we now give :—

NEW BRITAIN (Connecticut, U.S.)
November 9th, 1869.

Mason C. Weld, Esq.

DEAR SIR,—I have your letter of 5th. I give below all the facts relating to the early history of the Brahma Pootra fowls I can call to mind at this late day. At an earlier day I could have given a history of these fowls more satisfactory to myself, *i.e.* more fully than I can now; nevertheless so far as it goes the truth of it cannot be questioned. I will at once answer your questions.

1st.—Mr. Chamberlain's Christian name is Nelson H.

2nd.—The sailor's name I never made note of, and cannot give it.

3rd.—The ship arrived in New York in September, 1846. The first brood came out in May, 1847. I purchased the most of that brood in August, and the old pair the April following.

4th.—The name of the port from which the ship sailed with the fowls on board is Luckipoor. This port is up from the mouth of the Brahma Pootra river, in India. The name of the ship I cannot give, neither can I give the name of the captain. Did not at the time think it of importance, and made no record of it.

5th.—The Brahmas were first exhibited in Boston by Mr. Hatch, of Hampton, Conn., under the name of Grey Chittagongs, in 1850. I declined exhibiting mine at that time: I believed them to be a breed different from the Chittagong, and preferred to accumulate stock and test them further before bringing them out publicly.

6th.—I attended the exhibition at Boston, and contended that they differed from the Chittagongs, and should pass under a different name. A committee was appointed and the name Brahma Pootra given; it being the name of the great river from the banks of which they came. The name was then established.

7th.—Weight of cocks, full-sized, 12 to 14 lbs.; cocks, 6 to 7 months, 9 to 10 lbs. Hens when first introduced 9 to 10 lbs.

8th.—I did notice the "pea-comb" on the first birds. It was small. It was not so with all, and yet it appeared different from the comb of the Chittagong.

9th.—There was no degeneracy in the birds of my breeding. I had some specimens larger than the imported birds. I sold no birds until December, 1850. I sold at first at 12 dols. per pair, and soon after from 15 dols. to 50 dols. per pair. The price went up as the fowls became better known, and recognized as a distinct breed.

10th.—I bred them eight years, when my health failed, and I was obliged to leave all care for a time.

11th.—*There was a tendency to throw dark chickens*, but a greater tendency to become lighter, and yet not white like the White Dorking. All breeds of fowls having dark and light feathers can be varied either way to darker or lighter by choosing always the darkest or the lightest for breeders. If your stock of Brahmas are pure and they are allowed to breed together promiscuously, the variation in color will be slight. I never bred to either extreme.

Yours truly,

VIRGIL CORNISH.

This testimony, so full and explicit, must be considered finally to settle the question, especially when the character of the parties is concerned. Burnham never pretended to breed Brahmas till several years later than we here find the pure

strain well established in the country; and the judgment of a competent committee on the spot, in 1850, when all the details could be ascertained, would alone be sufficient, were the personal evidence now produced even wanting. Mr. Cornish's direct and explicit testimony is, however, the strongest portion of the case; and will we trust now set this long-vexed question at rest.

It will be observed by scientific breeders, that the original importation being now determined so early as 1846, greatly diminishes the difficulty of accounting for the Dark strains, allowing indeed ample time for their production by simple selection in the hands of those breeders who fancied the Dark tint. Since our first pages were written, we have met with other facts needless to enumerate here, which convince us that the two varieties are still capable of transmutation; and that while it is *possible* the "Dark" birds which came over in the same ship with those here recorded may also have been Brahmas, there is not the slightest reason to question that both may have been derived from the one stock introduced into Connecticut by Mr. Chamberlain, and afterwards fostered by Mr. Cornish and Dr. Bennett.

J. Wright & Co., Printers, 10 and 11, Stephen Street, Bristol.